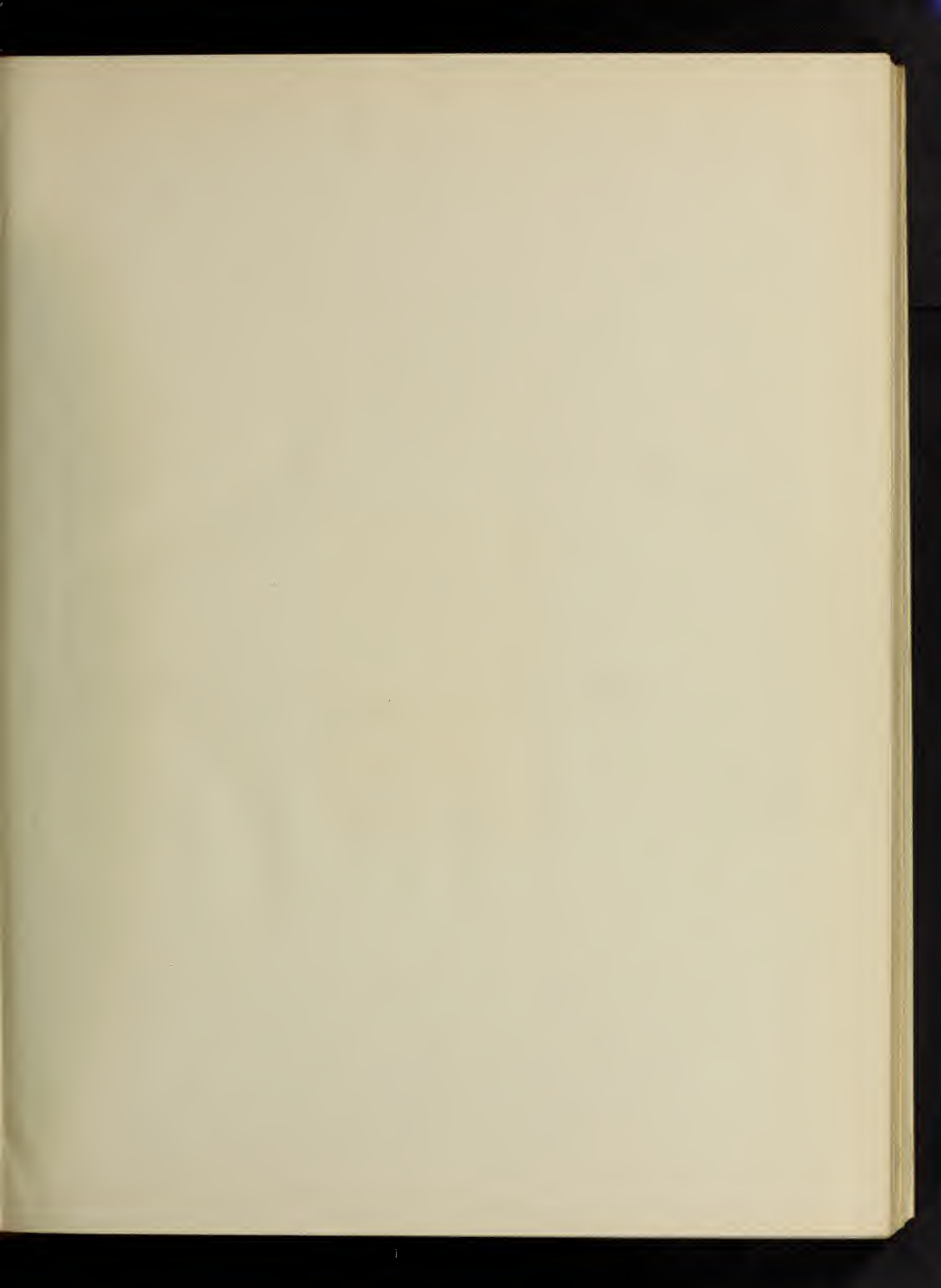


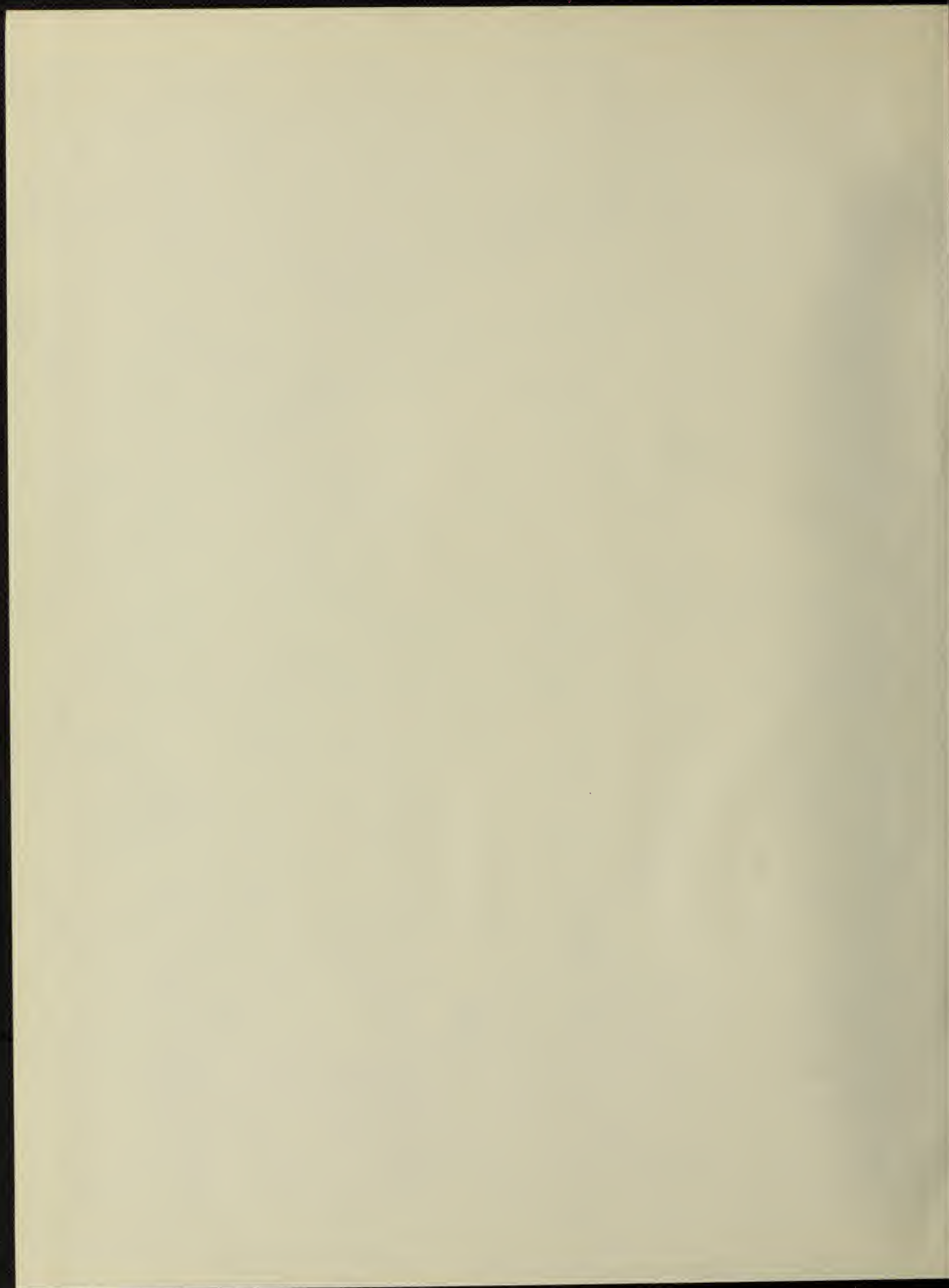
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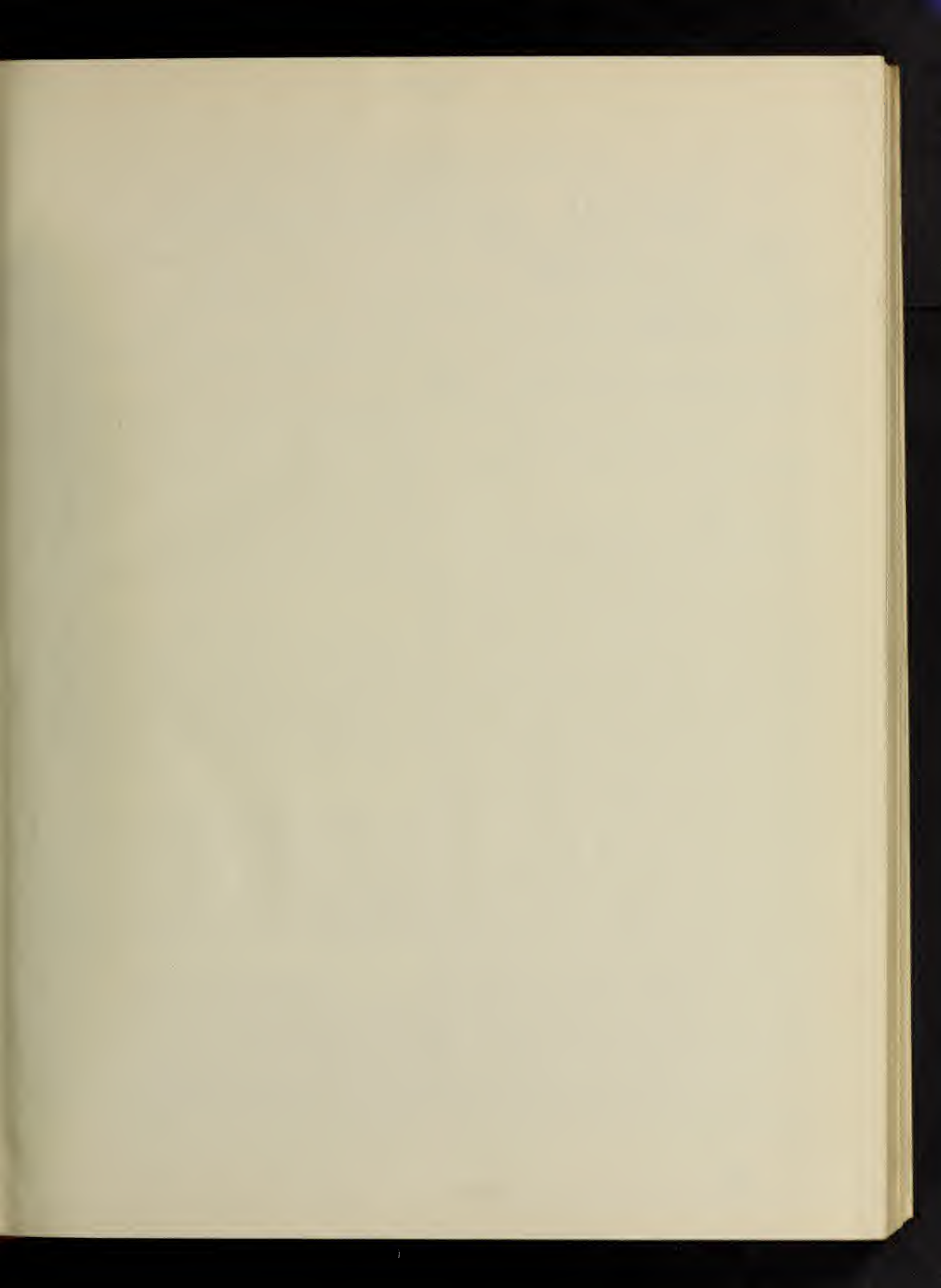
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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

DEC 8
28

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., JANUARY 1942 No. 1

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GENERAL SUMMARY

January 1942 was very cold during the first 10 days but unusually mild thereafter. No subzero temperatures occurred after the 10th, a record never before equaled in the climatological history of North Dakota. The precipitation was the least recorded in any January since state-wide records began. It occurred mostly as light snow at the beginning and again at the close of the month. More than the usual number of clear days were observed and only a few windstorms were reported. Due to unusually mild weather livestock was in very good condition, egg production was high, and farmers were able to accomplish much outdoor work. There was no snow on the ground in most sections between the 12th and 28th.

TEMPERATURE

The mean temperature for the state was 18.3°, or 11.8° above the 1892-1942 average for January. The mean temperature for the eastern division was 17.4°; for the middle division, 17.9°; and for the western division, 19.5°. The highest mean temperature was 23.6° at New England, and the lowest, 13.1° at Hannah, making a range in mean temperature of 10.5°. The absolute range was 95°, from 60° at four stations on the 22d and 23d, to -35° at five stations on the 3d, 6th, and 7th. The average daily excess in temperature for the state since January 1, 1942, is 11.8°.

PRECIPITATION

The average precipitation for the state was 0.09 inch, or 0.38 inch less than the 1892-1942 average for January. In the eastern division the average amount was 0.09 inch; in the middle division, 0.08 inch; and in the western division, 0.10 inch. The greatest monthly amount reported was 0.46 inch at Hannah; the least was none at Milnor. The greatest amount recorded in any 24 consecutive hours was 0.35 inch at Hannah on the 29th. The accumulated deficiency in precipitation for the state since January 1, 1942, is 0.38 inch. The average snowfall was 1.0 inch.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aurora												1	1	1	1	5	7	13	7	7	1	1	3	5	2	3	1				
Dust storms											2																				
Fogs	2	1	1	1	3	2	3	1	1																						
Lunar halos	6	8	2	3	2	1	1	1																							
Solar halos	2	1	1	3	1	2	1	1																							
Sleet											2																				
Thunderstorms											2	2	1																		

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	Percentage of sunshine
Bismarck	30.14	30.75	6	29.64	2	10.5	43	nw.	13	85	62	68	66
Devils Lake	30.07	30.64	7	29.64	2	9.6	34	nw.	13	92	73	78	65
Fargo	30.08	30.67	6	29.66	2	8.9	33	nw.	13	69	76	83	64
Williston	30.15	30.75	6	29.64	28	7.3	31	nw.	13	83	67	63	76

† And other dates.

COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	3.3	58	-52	0.31	0.41	0.25	0.32	2.8	4	15	8	8	
1893...	0.8	52	-48	0.93	0.94	1.11	0.99	8.4	7	11	11	8	
1894...	0.6	60	-47	0.38	0.40	0.38	0.39	3.6	4	13	8	9	
1895...	-2.9	42	-46	0.53	0.69	0.47	0.56	5.5	5	16	8	7	
1896...	5.3	58	-42	0.75	0.77	0.80	0.77	6.6	6	9	9	13	
1897...	3.6	49	-38	0.91	0.64	0.76	0.77	7.5	5	11	9	11	
1898...	14.6	69	-32	0.14	0.12	0.07	0.11	1.1	2	15	9	8	
1899...	5.2	55	-41	0.29	0.20	0.26	0.25	2.4	3	13	9	9	
1900...	15.4	70	-30	0.27	0.27	0.12	0.22	2.0	3	15	9	7	
1901...	7.7	68	-39	0.29	0.29	0.26	0.28	3.0	4	14	8	9	
1902...	12.7	51	-40	0.17	0.03	0.23	0.14	1.4	2	17	8	7	
1903...	9.4	56	-37	0.72	0.58	0.68	0.66	6.7	5	13	8	10	
1904...	3.6	50	-52	0.41	0.36	0.42	0.40	4.0	5	15	6	10	
1905...	0.9	48	-40	0.26	0.30	0.41	0.32	2.9	3	15	8	8	
1906...	12.2	60	-38	0.75	0.72	0.61	0.69	6.9	4	14	6	11	
1907...	-6.2	45	-45	1.77	1.13	1.05	1.32	14.5	8	12	8	11	
1908...	17.0	70	-41	0.21	0.16	0.34	0.24	1.9	2	17	8	6	
1909...	3.5	53	-48	0.60	0.32	0.37	0.43	4.3	4	14	8	9	
1910...	9.4	49	-35	0.30	0.21	0.59	0.37	4.1	3	16	8	7	
1911...	-1.0	56	-43	0.86	0.96	0.69	0.84	8.5	6	11	8	12	
1912...	-4.6	63	-52	0.34	0.34	0.36	0.35	3.6	4	16	6	9	
1913...	3.2	60	-54	0.51	0.40	0.43	0.45	4.6	5	12	9	10	
1914...	14.8	62	-38	0.56	0.48	0.40	0.48	4.9	4	12	8	11	
1915...	5.8	51	-48	0.39	0.24	0.25	0.29	3.4	3	12	9	10	
1916...	-6.4	49	-56	1.58	1.24	1.26	1.36	15.1	6	13	8	10	
1917...	1.7	47	-46	0.82	0.69	0.65	0.72	8.6	5	13	8	10	
1918...	0.5	48	-44	0.41	0.43	0.58	0.47	5.0	5	12	8	11	
1919...	18.7	66	-44	0.24	0.21	0.10	0.18	1.7	2	17	8	6	
1920...	2.7	49	-44	1.26	0.96	0.68	0.97	10.0	5	10	9	12	
1921...	15.9	52	-31	0.29	0.20	0.22	0.24	2.5	2	13	9	9	
1922...	7.0	55	-46	0.68	0.36	0.42	0.49	5.2	5	12	9	10	
1923...	10.1	56	-35	0.59	0.43	0.54	0.52	6.0	5	9	9	13	
1924...	2.6	61	-42	0.30	0.20	0.18	0.23	2.5	3	14	9	8	
1925...	8.6	52	-35	0.33	0.18	0.22	0.24	2.5	3	11	10	10	
1926...	16.3	55	-30	0.31	0.34	0.49	0.38	4.1	4	13	8	10	
1927...	10.1	60	-44	0.50	0.36	0.41	0.42	4.3	4	14	8	9	
1928...	13.0	50	-41	0.21	0.19	0.19	0.20	2.3	3	14	9	8	
1929...	-4.8	42	-42	0.76	0.48	0.63	0.62	9.2	6	13	8	10	
1930...	-1.9	41	-43	0.26	0.22	0.40	0.29	2.7	4	12	9	10	
1931...	21.4	68	-31	0.15	0.15	0.14	0.15	1.4	2	15	8	8	
1932...	9.5	50	-34	0.47	0.62	0.59	0.56	6.3	4	12	7	12	
1933...	11.8	53	-30	0.92	0.70	0.79	0.80	10.0	7	12	7	12	
1934...	15.8	54	-36	0.29	0.14	0.17	0.20	2.0	3	11	9	11	
1935...	3.3	60	-44	0.55	0.29	0.39	0.41	4.9	6	8	10	13	
1936...	-5.8	43	-44	0.51	0.48	0.69	0.56	6.9	7	11	8	12	
1937...	-8.3	38	-44	1.04	0.55	0.42	0.67	9.0	6	13	8	10	
1938...	9.5	50	-40	0.36	0.42	0.67	0.48	6.1	6	10	9	12	
1939...	15.0	55	-32	0.56	0.32	0.54	0.47	6.0	6	8	10	13	
1940...	3.4	48	-39	0.10	0.11	0.10	0.10	1.4	3	13	9	9	
1941...	11.0	53	-33	0.80	0.56	0.25	0.54	6.3	5	10	7	14	
1942...	18.3	60	-35	0.09	0.08	0.10	0.09	1.0	2	16	7	8	
Period	6.5	70	-56	0.53	0.43	0.45	0.47	5.1	4	13	8	10	

Climatological Data for January 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Casselton	Cass	961	46	19.0	+14.0	56	23	-24	7	0.04	-0.42	0.04	2	0.5	1	20	3	8	nw.	James H. Erickson.
Cavalier	Pembina	894	32	16.0	.....	52	22†	-28	6†	0.22	-0.45	0.08	27	2.3	3	19	3	9	nw.	City Light & Power Co.
Colgate	Steele	1,180	9	.....	.....	52	22†	-28	6†	0.06	.....	0.06	29	1.0	4	14	4	13	nw.	Wm. L. Haugen.
Cooperstown	Griggs	1,428	45	15.3	+11.0	52	23	-28	4†	0.10	-0.39	0.04	3	1.0	4	15	5	11	nw.	Theo. Marquardt.
Courtenay	Stutsman	1,523	12	.....	.....	52	23	-28	4†	0.12	-0.52	0.12	2	1.2	1	16	7	8	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	16.1	+14.3	47	23	-27	7	0.04	-0.43	0.02	2†	0.7	2	8	10	13	w.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	20.9	+12.1	58	23	-26	4	0.02	-0.38	0.01	3†	0.4	2	7	20	4	nw.	O. A. Thompson.
Edmore	Ramsey	1,524	18	14.2	+14.0	47	23	-30	7	0.06	-0.45	0.03	1	0.6	3	16	9	6	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	20.9	+10.9	60	22	-27	7	0.03	-0.46	0.02	2	0.5	2	20	4	7	nw.	J. E. Demmer.
Fargo	Cass	895	15	18.0	+14.2	52	23	-22	7	0.07	-0.60	0.03	2	0.8	4	8	9	14	nw.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	18.8	+11.7	54	24	-25	7†	0.07	-0.46	0.04	1†	0.7	0	17	5	9	nw.	Helge Dyste.
Fullerton	Dickey	1,439	44	20.2	+11.1	58	22	-25	7	0.08	-0.71	0.04	2	0.5	3	15	9	7	nw.	F. O. Alin.
Grafton	Walsh	827	50	17.8	+15.2	52	23	-25	6	0.28	-0.21	0.21	29	2.1	2	10	14	7	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	16.6	+13.0	51	23	-26	7	0.13	-0.38	0.04	11†	2.1	6	6	7	18	nw.	U. S. Weather Bureau.
Grand Forks Airport	Grand Forks	832	2	15.7	.....	51	23	-26	7	0.18	.....	0.09	29	2.1	6	8	7	16	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	19.8	+11.9	56	22†	-23	7†	0.09	-0.51	0.05	1†	0.7	0	14	15	2	w.	Joseph Rindt.
Hannah	Cavalier	1,568	50	13.1	+14.3	49	23	-30	6†	0.46	-0.26	0.35	29	4.7	2	12	13	6	nw.	A. E. Prior.
Hillsboro	Traill	901	42	18.2	+13.3	56	23	-24	7	0.11	-0.40	0.07	29	0.5	2	13	9	9	nw.	Ahred Jahnke.
Jamestown	Stutsman	1,457	50	19.6	+12.5	51	22†	-26	7	0.08	-0.47	0.04	3	0.8	3	21	1	9	nw.	S. G. Calvalage.
Jamestown Airport	Stutsman	1,491	2	18.3	.....	53	24	-27	7	0.09	.....	0.09	2	0.7	0	9	9	13	w.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	16.9	.....	54	24	-31	7	0.03	.....	0.02	2	0.4	2	13	12	6	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	14.4	+14.8	52	23	-31	6	0.23	-0.34	0.11	29	2.0	8	12	12	7	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	17.9	+14.1	60	23	-25	3†	0.11	-0.66	0.11	29	1†	0	12	6	13	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	20.2	+12.6	55	22	-23	7	0.16	-0.57	0.07	1†	0.7	0	17	6	8	nw.	J. O. Halverson.
Mayville	Traill	975	43	19.6	+13.6	52	23	-24	7	0.16	-0.24	0.14	29	1.3	2	18	6	7	nw.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	15.2	+13.7	53	23	-30	4†	0.08	-0.36	0.07	2	0.5	2	15	7	9	nw.	C. E. Blasky.
McLeod	Ransom	1,075	31	20.1	+11.8	60	23	-24	4†	0.09	-0.57	0.07	2	0.5	2	15	7	9	nw.	C. E. Blasky.
McVie	Nelson	1,367	12	.....	.....	54	24	-31	7	0.03	.....	0.02	2	0.4	2	13	12	6	nw.	J. G. Carlson.
Minor	Sargent	1,117	3	16.0	.....	46	24	-30	7	0.00	.....	0.00	2	0.0	0	23	6	2	nw.	M. Kabeary.
Oakes	Dickey	1,318	13	19.6	+10.7	59	22	-26	7	0.13	-0.48	0.10	29	1.3	2	14	10	7	nw.	E. W. Wilson.
Park River	Walsh	998	38	17.8	+14.9	56	23	-27	6	0.13	-0.26	0.10	29	1.3	2	14	10	7	nw.	F. H. Murray.
Pembina Airport	Pembina	803	68	14.2	+16.6	50	22	-28	6	0.23	-0.41	0.16	29	3.3	6	8	10	13	nw.	E. J. Taintor.
Petersburg	Nelson	1,520	12	.....	.....	54	24	-31	7	0.03	-0.02	0.02	2	0.6	1	15	8	8	nw.	U. S. Airway Comm. Sta.
Sharon	Steele	1,516	18	16.8	+13.3	55	23	-26	4†	0.04	-0.30	0.03	2	0.4	2	15	8	8	nw.	T. M. Rykken.
Valley City	Barnes	1,245	36	19.6	+13.5	50	22†	-24	6	0.12	-0.38	0.05	29	1.5	3	17	7	7	nw.	Nels O. Greifshelm.
Wahpeton	Richland	962	50	20.0	+11.3	52	22	-24	7	0.02	-0.40	0.01	2†	0.5	2	14	8	9	nw.	I. C. Robertson.
Average for Eastern Division				17.4	+12.6	60	22†	-31	6†	0.09	-0.44	0.35	29	1.0	2	14	8	9	nw.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	18.0	+9.3	54	22†	-30	7	0.02	-0.45	0.01	2	0.2	2	11	13	7	w.	U. S. Airway Comm. Sta.
Beulah	Merced	1,797	28	.....	.....	54	22†	-30	7	0.12	-0.14	0.05	1	0.8	6	14	4	13	nw.	R. T. Hamilton.
Bisbee	Towner	1,601	39	15.1	+13.3	50	21	-31	7	0.06	-0.37	0.04	2	1.5	2	21	4	6	nw.	Robert L. Peterson.
Bismarek	Burleigh	1,650	68	19.4	+11.6	54	24	-28	7	0.01	-0.41	0.02	2	0.7	2	14	10	7	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	13.7	+12.3	45	21†	-35	7	0.08	-0.33	0.05	29	0.8	2	11	5	15	nw.	N. D. School of Forestry.
Carrington	Foster	1,579	44	16.6	+9.9	51	23	-27	3†	0.07	-0.32	0.03	1†	0.7	0	17	5	9	nw.	Soo Line Agent.
Carson	Grant	2,500	30	21.0	+10.9	60	22	-29	7	0.03	-0.31	0.03	2	0.3	1	19	7	5	nw.	J. W. Evans.
Center	Oliver	1,880	16	19.5	.....	55	22	-27	7	0.14	.....	0.66	2	1.8	4	15	10	6	w.	Fred L. Heinz.
Dogden Butte II	McLean	1,880	16	19.6	+11.7	50	21	-27	3	0.09	-0.26	0.05	2	1.5	2	15	8	8	sw.	R. L. Williams.
Drake	McHenry	1,634	13	16.8	+11.3	50	21†	-31	4	0.12	-0.17	0.08	2	0.7	3	18	5	8	w.	H. G. Krueger.
Dunsmuir	Rolette	1,682	46	14.7	+11.9	51	21	-23	7	0.16	-0.28	0.08	2	1.7	3	13	12	6	nw.	Geo. Gehres.
Eckman	Bottineau	1,500	37	16.4	+13.3	50	16†	-32	3	0.04	-0.32	0.03	2	0.9	2	14	7	10	nw.	R. F. Nowak.
Energy II	McLean	1,750	27	19.0	+9.1	54	23	-32	7	0.08	-0.31	0.05	2	1.0	2	19	9	3	nw.	H. S. Sojenberger.
Fessenden	Wells	1,610	30	17.6	+12.9	49	21†	-39	3	0.08	-0.40	0.05	2	1.0	2	17	13	1	sw.	John V. Zuber.
Fort Yates	Sioux	1,670	42	21.6	+12.0	54	26	-29	7	0.10	-0.41	0.07	2†	0.7	0	25	2	4	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	19.0	+12.2	52	22	-29	3	0.10	-0.35	0.07	29	1.8	2	15	8	8	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	19.1	.....	51	21	-29	4	0.10	-0.28	0.10	2	1.0	1	18	8	5	nw.	A. H. Hout.
Garrison	McLean	1,825	65	18.6	+10.7	51	23†	-29	7	0.13	-0.21	0.05	2	2.6	4	12	13	6	nw.	E. L. Vorechek.
Granville	McHenry	1,504	35	20.8	+15.7	55	20†	-29	3†	0.16	-0.20	0.16	28	2.0	1	20	3	8	nw.	C. A. Stubbins.
Hansboro	Towner	1,597	34	14.9	+14.3	54	23	-30	7	0.19	-0.47	0.14	28	2.0	2	15	7	9	nw.	W. E. Fisher.
Leeds	Benson	1,515	2	16.2	.....	46	21	-28	3	0.13	.....	0.04	29	2.0	4	15	8	8	w.	Carl T. Carlson.
Linton	Emmons	1,711	25	19.6	+10.3	55	24	-35	7	0.13	-0.38	0.07	2	0.9	2	19	7	5	nw.	Wm. Heyerman.
Maddock	Benson	1,604	27	17.6	+13.0	48	23	-30	3	0.09	-0.21	0.07	2	0.9	2	11	12	8	nw.	A. T. Felland.
Mandan	Morton	1,750	28	20.0	+11.4	54	22†	-27	7	0.13	-0.35	0.07	1†	0.7	0	20	2	9	nw.	No. Gt. Plains Field Sta.
Manfred	Wells	1,605	39	.....	.....	52	23	-32	3†	0.04	-0.45	0.03	2	0.5	2	18	5	8	nw.	P. B. Anderson.
Max	McLean	2,093	13	16.0	+11.5	52	23	-32	3†	0.04	-0.35	0.03	2	0.5	2	18	5	8	nw.	A. W. Rice.
McClusky	Sheridan	1,943																		

551.05
UNNT
1942-48

NATURAL
HISTORY

JANUARY 1942

CLIMATOLOGICAL DATA: NORTH DAKOTA SECTION

3

Climatological Data for January 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Western Division																					
Alpha	Golden Valley	15	15	21.8	+7.2	55	22	-26	3†	0.04	-0.42	0.04	25	0.5	1	20	5	6	w.	H. A. Bury.	
Amidon	Slope	2,908	19	21.8	+7.2	55	22	-26	3†	0.15	-0.27	0.10	25	1.3	3	19	10	2	w.	Stanley W. Bale.	
Beach	Golden Valley	2,759	36	21.6	+9.5	55	27	-25	3†	0.14	-0.33	0.07	2	1.1	3	12	14	5	nw.	J. C. Russell.	
Berthold Agency H.	McLean	2,082	48	19.0	+10.4	53	12†	-35	3	0.06	-0.19	0.06	7	0.8	1	18	8	5	nw.	H. W. Case.	
Bowbells	Burke	1,958	13	17.0	+12.9	51	23	-32	3†	0.10	-0.45	0.06	28	0.7	2	15	4	12	w.	Charles Kaufman.	
Bowman	Bowman	2,872	27	20.2	+5.6	54	25	-30	5	-0.11	-0.35	0.07	3	0.7	2	20	2	9	nw.	Oscar L. Erickson.	
Crosby	Divide	1,954	33	17.0	+12.6	51	21	-33	3	0.16	-0.25	0.08	29	1.9	4	18	5	8	w.	J. H. Phelps.	
Dickinson	Stark	2,543	49	19.0	+8.4	54	21	-33	7	0.17	-0.25	0.09	1	2.2	5	18	6	7	nw.	Leroy Moomaw.	
Dickinson Airport	Stark	2,583	2	21.4		54	21†	-27	6†	0.06	-0.30	0.04	26	0.3	3	10	17	4	w.	U. S. Airway Comm. Sta.	
Dunn Center	Dunn	2,191	42	20.4	+8.2	57	22†	-34	7	T.	-0.39	T.	2†	T.	0	22	4	5	nw.	O. T. Evenson.	
Epping	Williams	2,224	31	17.8	+12.6	50	26	-22	5†	0.14	-0.30	0.08	2	1.4	4	24	4	3	sw.	T. Beachler.	
Fairfield	Billings	5	5							0.03	-0.54	0.03	2	0.2	1	22	4	5	nw.	Mrs. Edith Larson.	
Fryburg	Billings	2,790	23	21.2		53	23	-28	3	0.10	-0.35	0.04	8†	1.2	3	20	4	7	nw.	Verne King.	
Golva	Golden Valley	2	2	21.0		54	25	-28	4†	0.11		0.03	9	0.6	6	13	12	6	w.	U. S. Airway Comm. Sta.	
Halliday	Dunn	2,073	2							0.20		0.15	2	2.5	3	15	10	6	nw.	Thom. C. Lorenzen.	
Hettinger	Adams	2,675	34	21.8	+8.1	56	21†	-26	3†	0.02	-0.28	0.02	31	0.2	1	24	5	2	nw.	C. J. Aulstad.	
Howard H. (near)	Williams	2,275	34																	C. P. Amsbaugh.	
Kennmare	Ward	1,799	10	19.1		56	22	-30	4	0.18	-0.17	0.11	29	1.9	4	20	7	4	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	32	19.6	+6.1	52	23†	-34	5	0.07	-0.33	0.05	26	T.	2	16	9	6	nw.	S. P. Grane.	
Mary	McKenzie	13	13							0.02	-0.42	0.02	8	0.8	1	18	11	2	nw.	Fred Hartman.	
Medora	Billings	2,271	26							0.02	-0.55	0.02	31	0.2	1	24	4	3	nw.	Vernon Thompson.	
Mott	Hettinger	2,424	34	22.4	+12.2	58	22	-28	7	0.01	-0.63	0.01	1	0.1	1	14	10	7	nw.	P. G. Wick.	
New England	Hettinger	2,400	47	23.6	+10.1	57	22	-24	2	0.02	-0.48	0.02	25	T.	1	21	3	7	nw.	F. S. Sleight.	
Parshall	Mountrail	1,929	26	16.0		50	23†	-32	4†	0.16	-0.08	0.08	2	1.5	3	12	14	5	nw.	C. E. Shubert.	
Porter	Burke	1,954	36	16.0	+13.0	48	22†	-32	3†	0.10	-0.32	0.10	29	2.0	1	12	16	3	w.	R. G. Wegener.	
Powers Lake	Burke	2,205	36	18.6	+10.5	51	22	-32	3	0.30	-0.21	0.16	18	4.6	4	19	8	4	w.	Geo. B. Gee.	
Richardton	Stark	2,467	25	20.8	+9.7	53	22	-27	3	0.02	-0.36	0.02	29	0.2	1	21	5	5	nw.	Assumption Abbey.	
Sanish	Mountrail	1,835	16	15.8	+10.7	52	23†	-35	7	0.12	-0.36	0.05	2	1.0	3	19	5	7	nw.	H. J. Bugge.	
Stanley	Mountrail	2,258	4	16.2		52	23†	-32	3	0.06		0.06	29	0.6	1	16	9	6	w.	Leroy Edwards.	
Tioga	Williams	2,279	13							0.02	-0.44	0.02	28	0.5	1	18	4	9	sw.	B. V. Olson.	
Trotters	Golden Valley	16	16							0.13	-0.27	0.10	2	1.4	3	9	17	5	sw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	2	18.2		51	23†	-32	7	0.08		0.05	29	0.2	2	18	6	7	w.	Soil Conservation Serv.	
Watford City	McKenzie	2,084	28	20.4	+10.6	53	23†	-31	3	0.05	-0.42	0.05	8	0.5	1	22	6	3	w.	J. C. Zeller.	
Wildrose	Williams	2,258	14							0.10	-0.41	0.07	29	1.2	2	22	2	7	sw.	L. Holter.	
Williston	Williams	1,878	62	19.7	+13.3	50	25	-27	3	0.15	-0.39	0.07	28-29	1.5	5	21	3	7	sw.	U. S. Weather Bureau.	
Average for Western Division					19.5	+10.2	58	22	-35	3†	0.10	-0.35	0.16	18	1.0	2	18	7	6	nw.	
Average for the State					18.3	+11.8	60	22†	-35	3†	0.09	-0.38	0.35	29	1.0	2	16	7	8	nw.	

Daily Temperatures for January 1942

Stations		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley 1.....	Maximum...	0	14	-12	-9	2	-7	6	13	4	32	46	46	47	43	47	49	40	48	48	46	52	54	51	54	50	48	34	42	31	22	19	31.0	
	Minimum...	-18	-18	-25	-27	-26	-24	-30	-9	-25	0	12	20	26	16	22	18	13	18	21	23	24	13	8	27	12	10	15	18	19	13	8	5.0	
Beach.....	Maximum...	-5	16	-4	-8	2	1	4	13	18	36	44	45	42	46	49	45	39	43	43	45	49	52	52	50	54	46	55	44	36	27	27	32.5	
	Minimum...	-22	-12	-15	-21	-25	-18	-24	-4	-4	-5	26	27	32	23	23	20	21	20	21	21	25	23	22	27	26	31	26	26	21	20	14	10.8	
Bismarek 1.....	Maximum...	0	15	-11	-8	9	3	10	14	5	34	47	48	48	50	47	49	41	48	48	45	53	54	48	54	49	52	41	40	33	23	20	32.0	
	Minimum...	-19	-13	-24	-21	-24	-24	-28	-4	-22	2	14	22	21	22	22	18	15	19	21	22	20	13	7	24	21	19	16	24	19	14	6.8		
Bottineau.....	Maximum...	3	5	-14	-15	-2	-14	5	9	14	24	40	35	42	40	39	42	41	43	42	38	45	43	38	45	32	40	27	33	23	20	21	25.3	
	Minimum...	-20	-18	-33	-32	-30	-27	-25	-29	-28	-28	8	15	14	12	14	20	18	21	18	18	20	18	18	20	13	12	22	20	12	11	2.1		
Carson.....	Maximum...	1	16	-6	-10	9	1	10	15	14	35	48	50	47	50	50	54	40	49	48	48	55	60	57	54	56	51	48	45	48	24	22	35.1	
	Minimum...	-21	-16	-26	-26	-26	-24	-29	-6	-18	-1	19	24	29	21	22	18	17	14	19	20	21	18	15	25	23	26	18	20	19	14	9	7.0	
Crosby.....	Maximum...	-3	10	-10	-9	2	-3	-9	6	12	30	43	43	41	42	45	45	41	42	41	45	51	48	49	49	43	45	38	31	22	23	28.5		
	Minimum...	-21	-20	-33	-23	-28	-29	-31	-6	-26	0	17	20	26	19	20	22	19	18	22	16	17	13	19	14	27	20	23	17	14	10	5.6		
Devils Lake 1.....	Maximum...	-1	2	-14	-15	-1	-14	-6	5	0	24	39	37	42	41	38	45	41	41	42	40	46	46	47	46	29	37	30	36	33	20	17	25.3	
	Minimum...	-16	-18	-26	-24	-23	-25	-27	-18	-23	0	10	19	25	15	22	23	18	22	20	22	29	20	24	27	19	17	20	24	19	7	11	6.9	
Dickinson Airport 1.....	Maximum...	-2	15	-6	-10	-6	-2	7	14	17	34	46	49	44	49	50	47	37	44	46	48	54	52	54	53	51	46	50	46	31	26	27	33.0	
	Minimum...	-20	-19	-25	-21	-22	-27	-27	-2	-17	11	24	27	30	22	23	21	21	19	19	22	27	20	18	29	26	30	21	27	20	13	10	9.7	
Dunn Center.....	Maximum...	0	13	-6	-10	-6	0	9	13	15	34	48	49	45	49	50	53	40	47	47	55	57	55	51	57	49	45	40	35	25	24	33.6		
	Minimum...	-22	-15	-30	-22	-24	-34	-4	-18	2	23	24	27	22	20	12	18	19	18	21	20	20	10	25	22	25	16	20	18	15	10	7.1		
Fargo.....	Maximum...	0	8	-10	-5	-2	-5	3	10	0	24	39	35	45	41	40	47	32	42	46	43	48	51	52	50	33	31	32	39	36	24	16	27.4	
	Minimum...	-8	-12	-20	-21	-22	-20	-22	-12	-18	-6	12	19	25	14	21	21	20	23	25	28	21	22	28	20	23	21	20	20	11	9	8.5		
Fessenden.....	Maximum...	1	-3	-13	0	-2	5	8	5	23	42	39	42	46	41	41	40	42	45	41	49	47	46	49	40	43	40	39	34	22	20	28.6		
	Minimum...	-18	-12	-29	-24	-23	-25	-27	-4	-24	-10	10	19	18	28	21	23	13	20	22	21	28	20	18	28	15	12	21	22	20	15	9	6.7	
Fullerton.....	Maximum...	-2	10	-10	-6	-4	0	6	12	8	33	47	42	47	45	43	47	41	46	49	46	53	58	53	54	47	37	37	46	40	27	22	31.7	
	Minimum...	-14	-18	-20	-22	-22	-17	-25	-3	-23	-6	14	24	22	15	25	16	18	23	25	25	28	21	22	31	25	20	21	17	25	19	7	8.8	
Garrison 1.....	Maximum...	1	11	-8	-11	0	-10	9	10	8	31	44	46	45	47	43	45	42	45	45	42	49	50	51	51	45	49	29	39	32	21	19	29.6	
	Minimum...	-18	-12	-28	-24	-24	-26	-29	-9	-22	3	16	18	28	22	22	19	19	20	23	22	25	18	10	25	21	22	20	24	17	14	12	7.5	
Grafton.....	Maximum...	2	4	-2	-2	0	0	1	9	-2	22	39	38	42	41	44	42	40	41	45	42	47	48	52	45	42	33	32	35	34	23	17	27.7	
	Minimum...	-11	-10	-23	-21	-22	-25	-22	-7	-18	-11	5	16	23	11	23	20	17	24	19	21	31	22	23	25	20	20	21	22	22	16	12	7.8	
Grand Forks Airport 1.....	Maximum...	1	2	-3	-9	2	-11	2	7	-1	23	37	26	41	42	38	43	38	39	43	41	45	48	51	45	45	29	30	38	35	21	16	25.5	
	Minimum...	-15	-15	-22	-22	-24	-26	-15	-20	-4	3	16	19	10	21	20	14	19	20	19	27	18	21	21	18	23	22	19	10	7	5.9			
Jamestown Airport 1.....	Maximum...	5	9	-11	10	2	-6	6	9	-2	30	43	44	46	45	46	50	42	47	50	46	51	52	50	53	37	40	30	40	31	24	23	29.7	
	Minimum...	-13	-15	-25	-23	-23	-23	-27	-13	-21	-3	14	24	21	14	21	18	16	21	23	23	28	20	19	29	20	15	22	20	22	6	6	6.9	
Kenmare.....	Maximum...	10	10	-10	-12	-2	-9	11	8	28	37	45	48	41	45	49	52	41	47	48	52	44	56	53	50	48	49	34	33	22	21	20	31.5	
	Minimum...	-16	-16	-28	-30	-22	-27	-27	-12	-23	-21	19	23	25	23	24	24	21	21	25	24	25	23	15	15	15	15	20	21	16	10	21	6.7	
Langdon.....	Maximum...	4	5	-6	-13	-4	-10	-3	7	5	23	37	36	39	36	38	40	43	40	44	40	47	44	52	43	35	34	32	30	30	23	18	25.1	
	Minimum...	-17	-11	-29	-26	-26	-31	-29	-12	-22	-13	0	16	26	6	17	21	13	20	20	17	23	17	22	20	19	13	14	18	15	10	3	3.7	
Marmarth.....	Maximum...	-6	20	-1	-6	7	3	3	16	38	36	42	45	45	46	50	45	40	44	42	44	49	43	52	49	52	45	51	48	35	33	30	33.5	
	Minimum...	-27	-19	-27	-22	-34	-20	-26	-7	1	6	21	15	23	20	15	10	16	9	12	12	10	5	10	20	20	30	20	24	22	21	16	5.7	
Minot 1.....	Maximum...	4	8	-7	-10	3	-8	11	9	12	30	45	47	46	48	46	50	42	48	49	43	56	54	53	52	43	53	30	35	32	22	20	31.2	
	Minimum...	-18	-20	-30	-22	-23	-26	-25	-3	-27	10	17	20	17	29	20	20	23	18	18	21	22	28	20	13	29	13	18	22	27	17	15	11	7.6
Mott.....	Maximum...	0	17	4	-6	10	2	10	17	18	37	50	54	46	51	50	53	40	47	48	50	57	58	57	53	56	49	52	40	28	27	36.4		
	Minimum...	-20	-16	-26	-23	-26	-17	-28	-9	-16	9	20	22	23	25	20	24	20	12	18	22	19	22	13	20	32	25	16	23	22	19	15	8.4	
Pembina Airport 1.....	Maximum...	-1	2	-16	-13	-4	-17	-2	0	-3	21	38	27	40	43	36	39	37	40	43	42	43	50	50	43	25	30	27	36	32	19	15	23.3	
	Minimum...	-14	-18	-26	-26	-24	-28	-24	-18	-20	-4	5	10	12	8	22	22	16	21	22	22	26	18	25	21	20	21	20	21	18	11	3	5.1	
Sharon.....	Maximum...	2	3	0	-11	1	-1	0	7	-1	24	40	36	42	39	40	44	41	42	45	42	47	48	55	48	30	38	32	35	34	22	27	2.2	
	Minimum...	-14	-13	-25	-26	-24	-24	-26	-8	-23	-14	3	21	27	10	19	24	15	21	22	22	28	19	22	24	18	17	21	19	21	12	7	6.3	
Steele.....	Maximum...	-4	11	-6	-15	0	-3	1	9	4	30	45	44	46	45	45	47	41	46	46	44	53	51	46	52	46	41	32	41	35	20	29.5		
	Minimum...	-20	-19	-30	-30	-30	-27	-34	-10	-26	-5	13	27	23	14	17	18	11	13	18	16	17	10	7	19	14	12	19	21	20	15	4	2.8	
Valley City.....	Maximum...	5	8	-8	-9	2	5	3	11	6	28	44	40	45	45	41	46	46	41	46	41	47	50	50	50	40	36	35	40	40	27	34.0		
	Minimum...	-10	-9	-21	-21	-21	-24	-18	-15	-20	-10	10	22	24	15	23	22	18	23	23	27	22	21	27	21	19	20	19	26	20	8	8	8.6	
Wahpeton.....	Maximum...	5	11	7	-1	1	1	0	2	15	9	29	20	47	47	41	43	48	42	42	47	46	48	52	52	51	47	30	42	37	33	21	31.2	
	Minimum...	-3	-13	-20	-21	-21	-18	-24	-3	-20	-11	6	20	23	13	22																		

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
<i>Eastern Division</i>																																			
Casselton	Red	T	.04	T																													0.04		
Cooperstown ²	Sheyenne	.02		.04						.02							T										T		T	T	.02		0.04		
Courtenay	James		.12																											T	T		0.12		
Devils Lake ¹	Devils Lake	T	.02			T	T	T	T			T		T												T	T		T	T	T		0.04		
Edgeley	James			.01																											.01		0.02		
Edmore	Devils Lake	.03		.01										T												T		.02		T			0.06		
Ellendale	James	T	.02							T																							0.03		
Fargo ¹	Red	.01	.03	T		T	T	T	T		T	T		T							T						T		.02	T	.01		0.07		
Forman	Sheyenne	T																														T			
Fullerton	James		.04	T					T																		T			.02	.02	T		0.08	
Grafton	Red			T					T				.07																	.21	T		0.28		
Grand Forks Airport ³	.do	.02	.01	.03	T	T			T	T		T	.04	T												T	T	T	T	.05	.03	T		0.18	
Hankinson ²	.do	T																													T				
Hannah	Pembina		.11			T						T														T	T	T	T	.35	T	T		0.4	
Hillsboro	Red		.04																											.07	T		0.1		
Jamestown Airport ³	James		T			T			T																			T	T	T	T	T			
Langdon	Pembina	.01	T	.03					.01			.01														.03	T	.01	.11	.02	T		0.23		
Larimore	Red	T	T	T																										T	T	T			
Lisbon	Sheyenne	T	T						T																					T	T	T			
Mayville	Red		.02																								T		.14	T	T		0.16		
McHenry	James		.07																											.01	T	T		0.08	
McLeod	Sheyenne																											T					T		
Oakes	James			T																													T		
Park River	Red		T																																

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ²Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³Data for 24 hours ending 12:30 a. m. C.S.T. [†]Precipitation measured with recording gage. *Precipitation included in the next following measurement. T. Trace, or precipitation less than 0.01 inch. [WBO, Minneapolis, 3 16 42-1100]

51.05
NNT
512

W.H.T.

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., FEBRUARY 1942 No. 2

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GENERAL SUMMARY

February 1942 was a mild pleasant month. A cold spell occurred between the 15th and 20th but the remainder of the month was very mild. The precipitation was light but it occurred on many days, and there was more than the usual amount of cloudy weather. The western section received more than three times as much precipitation as the eastern section. Only three other Februaries since 1892 had less precipitation recorded than February 1942, in the eastern division. The wind velocity was below normal and the only severe storm occurred on the 16th and 17th. Livestock were in much better than average condition for the season. Ranges in western North Dakota had a snow cover which necessitated supplemental feeding during the latter part of the month. In the central and eastern parts of the state pastures were open most of the month.

TEMPERATURE

The mean temperature for the state was 14.1°, or 4.4° above the 1892-1942 average for February. The mean temperature for the eastern division was 12.7°; for the middle division, 14.2°; and for the western division, 15.6°. The highest mean temperature was 19.9° at Beach, and the lowest, 6.6° at Hannah, making a range in mean temperature of 13.7°. The absolute range was 87°, from 57° at Dickinson on the 4th, to -30° at four stations on the 17th and 24th. The average daily excess in temperature for the state since January 1, 1942, is 8.1°.

PRECIPITATION

The average precipitation for the state was 0.36 inch, or 0.11 inch less than the 1892-1942 average for February. In the eastern division the average amount was 0.19 inch; in the middle division, 0.30 inch; and in the western division, 0.58 inch. The greatest monthly amount reported was 1.00 inch at Selfridge and Halliday; the least was a trace at McVile. The greatest amount recorded in any 24 consecutive hours was 0.70 inch at Selfridge on the 22d. The accumulated deficiency in precipitation for the state since January 1, 1942, is 0.06 inch. The average snowfall was 4.6 inches.

ERRATA

ANNUAL 1941—p. 56: Annual precipitation and departure.
Hankinson should be, 24.94 +6.19.
Wahpeton should be, 25.24 +4.31.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aurora					2						1				5	3	1								2	1	1				
Dust storms																															
Fogs	2	9	13	9	2	1	4	6	7	8	15	3	8	6	4	2	2	2	6	3	3	3	6	8	9	22	13				
Lunar halos	1	1	1	2		1	3												1	3	3	5	2	2	2						
Solar halos					1	3									2	6	4	2				2	4	2	2	1	2	3			
Sleet				1		4													1												
Thunderstorms																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	30.15	30.47	24	29.56	5	9.4	34	e.	16	88	72	78	40
Devils Lake.....	30.16	30.48	23	29.54	5	7.8	26	nw.	16	98	79	83	59
Fargo.....	30.18	30.43	21	29.63	5	10.2	35	nw.	16	92	75	80	58
Williston.....	30.12	30.50	24	29.55	5	6.3	24	nw.	15	84	73	75	36

† And other dates.

COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	10.0	62	-45	0.59	0.77	0.37	0.58	4.9	4	14	7	8	
1893...	-0.3	52	-41	1.01	0.51	0.22	0.58	5.7	4	12	7	9	
1894...	8.0	55	-54	0.28	0.23	0.16	0.22	2.3	2	14	9	5	
1895...	5.9	65	-40	0.33	0.41	0.33	0.36	3.6	4	13	7	8	
1896...	14.3	64	-50	0.56	0.29	0.38	0.41	4.3	3	12	9	8	
1897...	6.1	52	-29	1.14	1.05	1.30	1.16	11.5	7	12	7	9	
1898...	13.3	65	-40	0.46	0.46	0.46	0.46	4.5	3	13	8	7	
1899...	0.4	60	-34	0.22	0.16	0.22	0.20	1.9	3	14	8	6	
1900...	1.3	46	-43	0.20	0.55	0.66	0.47	4.5	4	12	9	7	
1901...	7.1	60	-48	0.32	0.30	0.31	0.31	2.9	3	15	7	6	
1902...	12.1	51	-31	0.73	1.10	1.12	0.98	6.7	6	10	6	12	
1903...	3.1	46	-33	0.48	0.25	0.41	0.38	3.7	3	19	4	5	
1904...	-2.1	52	-49	0.81	0.56	0.69	0.69	7.6	5	13	6	10	
1905...	8.2	64	-42	0.25	0.31	0.37	0.31	2.9	2	19	4	5	
1906...	9.8	57	-46	0.20	0.07	0.28	0.18	1.4	2	13	8	7	
1907...	10.7	58	-38	0.36	0.21	0.42	0.33	2.8	3	15	7	6	
1908...	13.8	62	-49	1.56	0.68	0.87	1.04	10.1	5	12	7	10	
1909...	9.6	56	-34	0.28	0.36	0.37	0.34	3.7	4	11	7	10	
1910...	3.4	56	-34	0.57	0.40	0.81	0.59	5.6	4	14	7	7	
1911...	7.3	55	-50	0.84	0.74	0.52	0.70	8.0	3	15	8	5	
1912...	11.8	48	-38	0.19	0.18	0.09	0.15	1.7	2	10	9	10	
1913...	8.5	64	-33	0.08	0.09	0.09	0.09	1.0	2	12	9	7	
1914...	1.0	57	-44	0.34	0.28	0.40	0.34	3.8	3	12	8	8	
1915...	17.4	50	-47	1.32	0.27	0.26	0.62	6.1	3	9	5	14	
1916...	6.4	55	-20	0.41	0.45	0.58	0.48	4.8	4	14	8	7	
1917...	-0.7	61	-39	0.84	0.58	0.55	0.66	7.1	5	10	8	10	
1918...	10.8	60	-48	0.20	0.16	0.29	0.22	2.3	3	13	9	6	
1919...	7.7	58	-41	0.68	0.73	0.44	0.62	6.5	5	10	8	10	
1920...	12.5	53	-40	0.38	0.25	0.28	0.30	3.2	3	11	9	9	
1921...	19.9	64	-36	0.52	0.39	0.25	0.39	3.8	3	11	10	7	
1922...	0.7	45	-33	1.41	1.17	1.00	1.19	12.8	5	13	6	9	
1923...	4.1	45	-39	0.78	0.64	0.51	0.64	7.2	4	13	7	8	
1924...	20.3	67	-40	0.39	0.43	0.35	0.39	4.2	3	14	6	9	
1925...	16.5	62	-27	0.48	0.30	0.08	0.29	3.6	3	10	9	9	
1926...	22.3	58	-39	0.47	0.44	0.31	0.41	3.7	4	9	9	10	
1927...	13.3	50	-19	0.49	0.31	0.27	0.36	3.1	4	12	7	9	
1928...	18.8	59	-31	0.13	0.06	0.15	0.11	1.2	2	14	8	7	
1929...	2.8	44	-19	0.30	0.28	0.30	0.29	3.3	4	12	8	8	
1930...	21.7	63	-44	1.41	1.15	0.97	1.18	11.7	6	11	8	9	
1931...	28.0	62	-30	0.34	0.20	0.31	0.28	2.9	2	14	6	8	
1932...	13.6	69	-31	0.30	0.37	0.30	0.32	4.3	3	12	9	8	
1933...	7.9	58	-45	0.25	0.26	0.34	0.28	3.3	3	13	8	7	
1934...	19.5	61	-30	0.08	0.04	0.07	0.06	0.7	1	13	8	7	
1935...	24.0	63	-25	0.21	0.24	0.15	0.20	1.9	2	13	7	8	
1936...	-12.9	43	-60	0.90	0.70	0.50	0.70	9.1	6	12	8	9	
1937...	6.8	55	-35	0.88	0.40	0.25	0.49	6.6	4	12	9	7	
1938...	7.2	60	-35	0.71	0.63	0.71	0.68	8.6	5	11	7	10	
1939...	-0.8	51	-46	0.85	0.60	0.45	0.63	9.7	5	13	8	7	
1940...	15.0	52	-29	0.63	0.59	0.60	0.61	7.8	7	5	8	16	
1941...	12.2	57	-40	0.23	0.18	0.24	0.22	2.8	3	12	8	8	
1942...	14.1	57	-30	0.19	0.30	0.58	0.36	4.6	5	6	9	13	
Period	9.7	69	-60	0.54	0.43	0.43	0.47	4.9	4	12	8	8	

AV

Climatological Data for February 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Casselton	Cass	961	46	14.4	+5.3	39	28	-20	17	0.32	-0.18	0.10	9†	5.5	5	16	5	7	nw.	James. H. Erickson.
Cavalier	Pembina	894	32	9.0		30	13†	-24	17†	0.42	-0.10	0.20	5	4.9	6	11	8	9	nw.	City Light & Power Co.
Colgate	Steele	1,180	9							0.10		0.10	9	1.5	1	10	8	10	ne.	Wm. L. Haugen.
Cooperstown	Griggs	1,428	45	9.8	+2.0	34	5	-25	17†	0.07	-0.33	0.02	3†	0.7	4	7	10	11	nw.	Theo. Marquardt.
Courtney	Stutsman	1,523	12							0.20	-0.48	0.20	20	1.5	1	2	4	22	uw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	11.6	+6.5	36	4	-23	17	0.23	-0.27	0.05	8-9	2.6	7	1	9	18	se.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	16.2	+3.4	48	5	-22	17	0.05	-0.28	0.05	14	0.5	1	2	20	6	nw.	O. A. Thompson.
Edmore	Ramsey	1,524	18	9.8	+5.0	34	5	-29	17	0.11	-0.33	0.05	5†	2.2	3	11	8	9	se.	Mike Davis.
Ellendale	Dickey	1,457	47	17.1	+4.0	46	5	-22	17	0.20	-0.34	0.08	16	2.8	4	6	7	15	s.	J. E. Demmer.
Fargo	Cass	895	15	13.4	+5.3	38	28	-18	17	0.22	-0.47	0.07	13-14	3.3	8	3	11	14	u.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	15.6	+5.7	37	28	-20	17	0.15	-0.39	0.06	9	1.5	3	7	10	11	n.	Helge Dyste.
Fullerton	Dickey	1,439	44	17.6	+5.2	45	5	-22	17	0.25	-0.68	0.07	8	2.2	5	5	12	11	nw.	F. O. Alin.
Grafton	Walsh	827	50	11.1	+3.8	32	28	-21	17	0.19	-0.35	0.09	5	1.5	3	7	17	4	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	10.7	+3.0	33	28	-24	17	0.19	-0.37	0.03	8†	1.9	10	1	10	17	nw.	U. S. Weather Bureau.
Grand Forks Airport	Grand Forks	832	2	9.6		32	28	-21	17	0.28		0.05	9	3.7	9	4	9	15	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	16.0	+1.9	47	5	-18	17†	0.07	-0.46	0.05	16	1.0	2	2	17	9	nw.	Joseph Rindt.
Hannah	Cavalier	1,568	50	6.6	+4.0	30	28	-30	17	0.10	-0.49	0.06	5	1.0	3	8	12	8	se.	A. E. Prior.
Hillsboro	Trails	901	42	12.6	+2.4	34	28	-21	17	0.26	-0.32	0.10	9	4.9	6	8	8	12	n.	Alfred Jahnke.
Janestown	Stutsman	1,457	50	15.6	+5.7	40	4	-22	17	0.25	-0.34	0.08	27	2.5	5	10	5	13	s.	S. G. Calvelage.
Janestown Airport	Stutsman	1,494	2	14.3		41	4	-23	17	0.04		0.02	8	0.7	3	2	8	18	se.	U. S. Airway Comm. Sta.
Jemshod	Stutsman	1,440	3	13.5		39	4	-26	17	0.14		0.05	16	2.9	5	8	10	10	nw.	U. S. Wildlife R. fuge.
Langdon	Cavalier	1,615	46	9.2	+4.4	34	13	-26	17	0.26	-0.36	0.06	5	2.6	11	12	8	8	se.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	10.6	+2.9	34	28	-23	17	0.14	-0.44	0.05	2†	3.0	3	4	8	16	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	16.2	+4.6	41	28	-21	17	0.16	-0.46	0.05	9	1.6	7	8	3	17	ne.	J. O. Halverson.
Mayville	Trails	975	46	12.1	+2.3	34	28	-21	17	0.27	-0.15	0.13	20	4.8	5	6	15	7	n.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	10.8	+5.4	37	4	-27	17	0.16	-0.34	0.04	16	1.8	6	7	10	11	se.	C. E. Blasky.
McLeod	Ransom	1,075	31	14.8	+1.8	35	4†	-20	17	0.38	-0.23	0.18	14	3.8	4	4	8	16	n.	J. G. Carlson.
McVie	Nelson	1,467	12							T.		T.	0	T.	0	10	11	7	n.	M. Kabeary.
Milnor	Sargent	1,117	3	11.8		39	28	-22	17	0.08		0.04	8	0.2	3	12	9	7	nw.	E. W. Wilson.
Oakes	Dickey	1,318	13	16.6	+3.7	43	5	-23	17	0.12	-0.38	0.05	16	1.2	5	11	1	16	n.	F. H. Murray.
Park River	Walsh	998	38	10.2	+2.5	30	4†	-24	17	0.29	-0.11	0.16	16	4.0	6	12	5	17	nw.	E. J. Talutor.
Pembina Airport	Pembina	803	68	8.6	+5.8	31	28	-23	17	0.31	-0.32	0.07	5	3.1	15	7	9	12	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12							0.05		0.03	9	0.5	2	4	14	10	nw.	T. M. Rykken.
Sharon	Steele	1,516	18	11.0	+1.5	33	28	-25	17	0.10	-0.23	0.03	20	1.1	5	5	7	16	nw.	Nels O. Greisheim.
Valley City	Barnes	1,245	36	15.8	+4.3	36	23	-21	17	0.42	-0.05	0.15	13	7.0	8	11	4	13	ne.	I. C. Robertson.
Wahpeton	Richland	962	50	16.7	+4.3	41	5†	-18	17	0.10	-0.39	0.04	9	5.0	6	5	11	12	se.	W. J. Cavanaugh.
Average for Eastern Division				12.7	+3.6	48	5	-30	17	0.19	-0.35	0.20	5†	2.5	5	7	9	12	nw.	
Middle Division																				
Ashley	McIntosh	2,014	46	14.2	+2.8	50	5	-25	17	0.12	-0.37	0.05	15	1.5	5	2	6	20	n.	U. S. Airway Comm. Sta.
Beulah	Merced	1,797	28							0.47	+0.11	0.18	22	5.7	8	0	13	15	nw.	R. T. Hamilton.
Bisbee	Towner	1,601	39	10.0	+3.5	29	5†	-23	17	0.24	-0.12	0.11	5	3.7	4	10	12	6	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,650	68	16.8	+6.5	48	4	-21	17	0.30	-0.14	0.08	22	6.5	11	1	8	19	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	10.1	+5.2	38	4	-28	17†	0.16	-0.19	0.04	5	1.6	7	10	1	17	nw.	N. D. School of Forestry
Carrington	Foster	1,579	44	11.7	+2.8	42	4	-23	17†	0.10	-0.27	0.06	20	1.5	3	5	0	23	nw.	Soo Line Agent.
Carson	Grant	2,500	30	17.2	+2.7	56	4	-27	17	0.84	+0.40	0.40	23	8.0	5	2	5	21	nw.	J. W. Evans.
Center	Oliver	1,880	4	17.8		45	2†	-22	17	0.47		0.30	23	4.7	9	0	16	12	nw.	Fred L. Heuz.
Dogden Butte II	McLean	1,880	16	15.0	+1.9	45	4	-22	17	0.16	-0.40	0.10	13	2.0	2	3	7	18	nw.	R. L. Williams.
Drake	McHenry	1,634	13	12.6	+2.2	47	4	-21	17	0.17	-0.19	0.03	5†	1.6	8	7	5	16	n.	H. G. Kringen.
Dunsmuir	Rolette	1,682	46	11.3	+4.6	36	4	-28	17	0.29	-0.14	0.11	5	2.3	5	3	13	12	se.	Geo. Gehres.
Eckman	Bottineau	1,500	37	12.9	+5.4	48	4	-25	17	0.42	+0.06	0.20	21	3.3	7	2	8	18	ne.	R. F. Nowak.
Energy II	McLean	1,750	27	16.2	+1.9	54	4	-20	17	0.27	-0.18	0.10	22	5.0	3	3	15	10	n.	H. S. Soleuburger.
Fessenden	Wells	1,610	30	13.9	+4.2	40	4	-23	17	0.90	+0.40	0.25	3	16.0	6	7	17	4	sw.	John V. Zuber.
Fort Yates	Sioux	1,670	42	20.2	+7.6	52	5	-19	17	0.70	+0.21	0.40	23	7.0	3	12	8	8	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	13.0	+1.0	47	4	-23	17	0.25	-0.24	0.06	23	5.1	7	2	12	14	se.	E. C. Bierbaum.
Gackle	Logan	1,951	12	16.0		44	5	-24	17	0.25	-0.19	0.13	14	3.0	3	10	9	9	ne.	A. H. Haut.
Garrison	McLean	1,925	65	14.9	+3.8	51	4	-23	17	0.40	-0.13	0.21	22-23	3.4	8	2	9	17	se.	E. L. Vorachek.
Granville	McHenry	1,504	35	16.0	+6.0	51	4	-23	17	0.07	-0.37	0.03	7†	0.8	3	6	6	16	se.	C. A. Stubbins.
Hansboro	Towner	1,597	34	8.6	+2.5	33	28	-26	17	0.09	-0.46	0.05	5	1.2	3	8	8	12	n.	W. E. Disher.
Leeds	Benson	1,515	2	11.0		37	4†	-23	17	0.06		0.06	5	0.6	1	9	8	11	n.	Carl T. Carlson.
Linton	Emmons	1,711	25	19.3	+5.5	50	5	-22	17	0.47	-0.01	0.15	8	7.3	7	7	5	16	nw.	Wm. Heyerman.
Madison	Benson	1,604	27	14.0	+3.8	40	4	-22	17	0.18	-0.20	0.06	13	1.8	5	4	12	12	nw.	A. T. Felland.
Mandan	Morton	1,750	28	15.6	+3.0	52	4	-22	17	0.47	+0.11	0.15	12	5.1	5	3	3	22	nw.	No. Gt. Plains Field Sta.
Manfred	Wells	1,605	39							0.31	-0.15	0.10	8†	3.2	6	10	7	17	nw.	P. B. Anderson.
Max	McLean	2,093	13	12.0	+2.4	48	4	-23	17	0.15	-0.35	0.06	22	2.2	4	9	2	11	nw.	A. W. Rice.
McClusky	Sheridan	1,843	24	16.6	+4.8	48	4	-23	18	0.10	-0.44	0.05	5†	1.0	2					

Climatological Data for February 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Alpha	Golden Valley	15	15	18.2	+2.0	49	4	-16	17	0.48	+0.01	0.16	23	4.8	6	9	9	10	w.	H. A. Bury.
Amidon	Slope	2,908	19	18.2	+2.0	49	4	-16	17	0.53	+0.03	0.24	23	9.2	8	9	9	10	w.	Stanley W. Bale.
Beach	Golden Valley	2,759	36	19.9	+3.9	47	4	-16	17	0.49	+0.08	0.20	22	4.9	7	3	13	12	nw.	J. C. Russell.
Berthold Agency II	McLean	2,062	43	18.0	+5.9	55	4	-20	17	0.66	+0.26	0.40	23	8.0	6	4	11	13	se.	H. W. Case.
Bowbells	Burke	1,958	13	11.1	+5.6	45	4	-24	17	0.28	-0.15	0.05	6	2.4	7	2	2	24	nw.	Charles Kaufman.
Bowman	Bowman	2,872	27	16.6	-0.8	49	4	-17	17	0.75	+0.27	0.45	23	10.5	5	5	4	19	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	33	14.3	+4.8	47	4	-22	17	0.69	+0.33	0.17	5	8.2	8	3	3	22	e.	J. H. Phelps.
Dickinson	Stark	2,543	49	14.3	+1.5	57	4	-21	17	0.77	+0.34	0.35	23	11.6	11	3	9	16	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,583	2	16.2	.....	51	4	-20	17	0.35	.....	0.14	23	6.8	8	1	11	16	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	15.8	+1.7	54	4	-23	17	0.67	+0.17	0.37	22	7.9	4	3	10	15	nw.	O. T. Evenson.
Epping	Williams	2,224	31	15.2	+5.8	45	4	-25	17	0.43	+0.02	0.32	22	4.2	2	8	10	10	se.	T. Beachler.
Fairfield	Billings	.....	5	.....	.....	.....	.....	.....	.....	0.90	+0.51	0.65	22	6.0	5	7	9	12	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	17.4	.....	51	4	-20	17	0.72	+0.25	0.38	23	6.8	5	6	5	17	nw.	Verne King.
Golva	Golden Valley	.....	2	15.0	.....	48	4	-30	24	0.67	.....	0.36	22	7.3	11	0	11	17	nw.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	.....	.....	.....	.....	.....	.....	.....	1.00	.....	0.30	22	20.0	7	5	7	16	se.	Thom. C. Lorenzen.
Hettinger	Adams	2,675	34	18.6	+2.1	51	4	-16	17	0.63	+0.21	0.30	23	8.4	5	10	12	6	nw.	C. J. Austad.
Howard II (near)	Williams	2,275	34	13.5	+4.5	50	4	-22	17	0.30	-0.26	0.09	21	3.0	4	4	1	23	se.	C. P. Amsbaugh.
Kenmare	Ward	1,799	10	11.8	.....	46	4	-22	17	0.53	+0.16	0.19	23	6.0	9	6	7	15	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	19.0	+1.8	48	4	-21	27	0.59	+0.15	0.22	22	8.6	6	5	9	14	nw.	S. P. Grane.
Mary	McKenzie	.....	13	.....	.....	.....	.....	.....	.....	0.23	-0.11	0.12	22	4.6	4	5	17	6	nw.	Fred Hartman.
Medora	Billings	2,271	26	.....	.....	.....	.....	.....	.....	0.65	+0.24	0.28	22	6.6	6	4	15	9	nw.	Vernon Thompson.
Mott	Hettinger	2,424	34	18.8	+4.7	54	4	-19	17	0.54	-0.08	0.25	23	10.2	5	1	8	19	nw.	P. G. Wick.
New England	Hettinger	2,400	47	16.2	+1.7	56	4	-20	16	0.66	+0.17	0.40	23	7.8	5	7	11	10	nw.	F. S. Sleight.
Parshall	Mountrail	1,929	26	13.0	.....	51	4	-21	17	0.31	-0.11	0.10	24	4.5	12	0	13	15	se.	C. E. Shubert.
Portal	Burke	1,954	36	10.2	+4.0	45	4	-21	18	0.16	-0.24	0.08	21	2.0	2	3	13	12	nw.	R. G. Wegener.
Powers Lake	Burke	2,205	36	14.6	+2.8	48	4	-23	16	0.65	+0.19	0.17	11	10.0	6	11	6	11	e.	Geo. B. Gee.
Richardton	Stark	2,467	25	16.3	+1.6	50	4	-23	17	0.89	+0.49	0.61	23	12.0	7	4	6	18	se.	Assumption Abbey.
Sanish	Mountrail	1,835	16	14.1	+5.5	52	4	-21	17	0.70	+0.27	0.50	23	7.0	4	3	9	16	se.	H. J. Bugge.
Stanley	Mountrail	2,258	4	12.6	.....	46	4	-25	17	0.22	.....	0.11	22	3.7	4	6	10	12	e.	Leroy Edwards.
Tioga	Williams	2,279	13	.....	.....	.....	.....	.....	.....	0.50	+0.08	0.40	23	6.0	2	3	8	17	se.	B. V. Olson.
Trotters	Golden Valley	.....	16	.....	.....	.....	.....	.....	.....	0.87	-0.50	0.37	22	8.1	10	2	11	15	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	2	16.4	.....	53	4	-21	17	0.48	.....	0.19	22	4.8	6	4	4	20	e.	Soil Conservation Serv.
Watford City	McKenzie	2,084	28	17.2	+3.5	51	4	-23	17	0.74	+0.32	0.38	23	9.2	6	9	7	12	nw.	J. C. Zeller.
Willrose	Williams	2,258	14	.....	.....	.....	.....	.....	.....	0.44	+0.01	0.15	22	6.4	6	7	2	19	se.	L. Holter.
Williston	Williams	1,878	62	15.3	+7.2	47	4	-20	17	0.79	+0.38	0.53	22-23	9.4	8	4	8	16	se.	U. S. Weather Bureau.
Average for Western Division				15.6	+3.2	57	4	-30	24	0.58	+0.15	0.65	22	7.3	6	5	9	14	nw.	.....
Average for the State				14.1	+4.4	57	4	-30	17	0.36	-0.11	0.75	22	4.6	5	6	9	13	nw.	.....

Daily Temperatures for February 1942

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley 1	Maximum	23	36	29	41	50	26	22	28	25	22	22	22	28	25	31	21	-9	11	23	31	27	23	23	29	24	25	30	35	.....	.....	.....	25.8
	Minimum	3	3	15	11	18	2	3	15	8	-4	8	17	5	9	1	-24	-25	-17	-7	13	11	11	8	5	-3	3	-6	4	.....	.....	.....	2.5
Beach	Maximum	29	41	35	47	40	37	28	27	28	40	42	38	30	26	27	-26	-6	18	34	36	32	27	22	9	20	20	18	29	.....	.....	.....	28.6
	Minimum	11	25	19	27	27	17	19	49	18	19	20	22	22	20	4	-6	-16	-16	16	16	16	20	7	0	-6	2	-8	-1	.....	.....	.....	11.2
Bismarck 1	Maximum	27	47	36	48	47	24	26	27	25	21	27	27	30	24	35	14	-6	17	22	36	24	21	20	20	21	18	25	29	.....	.....	.....	26.2
	Minimum	9	7	26	24	19	10	8	19	20	15	10	23	21	0	-2	-16	-21	-15	4	13	13	13	10	1	8	-2	-9	0	.....	.....	.....	7.4
Bottineau	Maximum	18	25	30	38	28	18	16	23	23	22	21	26	29	22	29	-12	-7	15	16	22	18	16	22	20	24	19	22	35	.....	.....	.....	20.6
	Minimum	8	2	10	17	21	-2	-4	-1	5	-10	-2	1	10	-5	-3	-22	-28	-28	-20	-4	10	10	7	2	0	2	8	8	.....	.....	.....	-0.4
Carson	Maximum	26	49	30	56	49	37	27	24	24	26	35	32	24	34	24	-5	19	25	41	27	20	19	22	19	17	13	18	.....	.....	.....	27.1	
	Minimum	10	11	17	20	23	16	12	16	19	15	15	20	18	11	5	-10	-27	-20	11	11	13	12	8	-8	5	-7	-9	0	.....	.....	.....	7.4
Crosby	Maximum	29	34	33	47	40	28	25	27	26	22	34	30	22	18	26	15	-5	12	22	28	16	16	15	16	15	20	20	22	.....	.....	.....	23.4
	Minimum	5	24	22	25	23	12	13	13	12	13	13	14	12	-7	-4	-16	-22	-21	1	8	7	8	8	0	1	-3	-14	0	.....	.....	.....	5.2
Devils Lake 1	Maximum	18	26	25	36	31	11	18	24	22	17	22	28	29	16	33	15	-8	9	18	18	20	18	16	20	21	18	23	34	.....	.....	.....	20.6
	Minimum	6	5	19	21	4	-5	-6	8	8	4	9	17	14	2	10	-18	-23	-18	-9	4	7	1	3	1	-5	8	3	4	.....	.....	.....	2.6
Dickinson Airport 1	Maximum	27	43	35	51	39	32	20	25	26	28	34	29	31	23	28	9	-7	21	28	38	25	20	14	13	16	20	13	23	.....	.....	.....	25.1
	Minimum	10	19	22	21	25	16	16	18	20	11	16	15	17	-2	3	-15	-20	-18	14	13	16	14	-4	-7	6	-11	-11	-3	.....	.....	.....	7.2
Dunn Center	Maximum	30	44	33	54	39	30	23	25	26	25	36	30	31	27	28	-6	-7	16	21	38	30	21	17	17	17	23	11	22	.....	.....	.....	26.2
	Minimum	2	19	22	20	19	17	9	17	18	13	7	19	19	9	15	-10	-23	-19	10	9	4	10	8	-13	-5	-10	-18	13	.....	.....	.....	5.5
Fargo	Maximum	22	25	28	32	33	14	28	25	29	20	25	26	30	27	32	-28	-7	8	17	21	23	24	21	19	20	19	26	38	.....	.....	.....	28.3
	Minimum	2	8	17	8	12	-1	-5	18	19	1	3	14	21	13	9	-15	-18	-18	-11	4	1	-4	4	2	-2	11	8	1	.....	.....	.....	3.6
Fessenden	Maximum	22	28	32	40	36	23	21	25	21	19	24	27	28	27	33	31	-7	13	23	25	20	28	17	18	26	19	24	29	.....	.....	.....	24.0
	Minimum	4	18	21	17	20	-3	-3	12	17	-6	0	19	12	9	7	-15	-23	-18	-13	5	7	1	3	0	-5	8	8	4	.....	.....	.....	3.8
Fullerton	Maximum	25	29	31	34	45	31	24	29	28	25	26	28	33	30	33	-32	-2	12	22	33	28	22	26	27	25	29	37	.....	.....	.....	27.5	
	Minimum	7	3	19	20	23	12	0	20	21	8	1	20	21	18	13	-5	-22	-18	-13	3	13	10	11	4	-2	12	12	4	.....	.....	.....	7.7
Garrison 1	Maximum	25	40	34	51	38	23	25	27	26	22	26	28	28	19	30	4	-9	17	21	30	21	17	20	19	21	20	19	26	.....	.....	.....	23.9
	Minimum	8	11	24	23	21	10	9	12	16	6	16	22	18	0	-3	-19	-20	-15	-4	15	12	10	8	-1	5	-6	-11	-1	.....	.....	.....	5.9
Grafton	Maximum	17	23	24	29	29	17	17	23	26	23	19	26	28	27	24	26	-6	10	11	20	21	18	16	19	19	18	24	32	.....	.....	.....	20.7
	Minimum	2	-2	19	11	-3	-10	-3	14	13	15	-3	16	2	-10	-11	-21	-16	-14	-3	0	-4	1	1	-1	1	9	4	10	.....	.....	.....	1.5
Grand Forks Airport 1	Maximum	17	24	25	30	28	11	18	22	25	18	19	26	27	16	25	-5	7	15	21	30	20	4	1	1	16	17	18	23	32	19.9
	Minimum	0	3	19	10	-6	-10	-11	16	14	-2	4	11	-4	-4	-19	-21	-19	-17	-1	-8	-12	-2	-1	-4	-5	-1	-2	.....	.....	.....	.....	-0.7
Jamestown Airport 1	Maximum	22	28	28	41	41	25	21	25	25	22	22	26	30	22	32	-22	-6	12	20	22	24	22	23	26	26	22	32	39	.....	.....	.....	24.8
	Minimum	4	-1	20	22	12	0	-4	17	6	3	11	19	20	6	10	-16	-23	-18	-14	6	3	2	4	3	-5	10	6	2	.....	.....	.....	3.8
Kenmare	Maximum	27	35	33	46	28	20	19	30	25	21	25	25	28	21	28	-3	-6	7	22	24	18	17	17	18	16	19	16	28	.....	.....	.....	21.7
	Minimum	9	11	19	20	24	3	1	6	12	0	11	10	17	6	-2	-13	-22	-22	-14	-5	10	9	6	-3	-5	-3	-14	-16	.....	.....	.....	2.0
Langdon	Maximum	15	22	25	31	30	14	15	24	25	25	19	25	34	21	26	-22	-5	10	14	14	16	14	16	22	21	22	25	32	.....	.....	.....	20.5
	Minimum	6	0	15	16	12	-14	-2	8	8	-8	-2	17	-9	-6	-23	-26	-23	-11	-1	-2	-5	-3	-2	-11	5	-2	-4	.....	.....	.....	.....	-2.2
Marmarth	Maximum	28	44	34	48	33	38	31	29	27	39	41	37	33	34	29	-25	-5	20	35	39	35	27	21	5	20	14	19	24	.....	.....	.....	28.9
	Minimum	12	15	19	20	20	22	21	20	20	20	20	28	25	25	10	21	-5	-12	-17	15	16	18	5	-20	-13	-13	-21	7	.....	.....	.....	9.2
Minot 1	Maximum	29	34	29	51	36	21	21	27	24	23	26	29	28	20	30	4	-7	18	21	25	22	19	20	19	18	20	24	30	.....	.....	.....	23.8
	Minimum	9	12	20	22	16	2	8	16	15	4	15	22	12	2	1	-19	-21	-16	-6	14	12	7	6	-4	4	-8	-10	3	.....	.....	.....	4.4
Mott	Maximum	29	48	40	54	46	33	27	29	27	27	34	32	33	28	35	-27	-10	27	43	34	24	21	24	18	20	15	22	.....	.....	.....	29.5	
	Minimum	8	24	29	16	20	23	15	17	22	18	12	22	13	5	-7	-19	-19	15	7	17	-12	10	-10	0	-9	-14	-22	.....	.....	.....	8.0	
Pembina Airport 1	Maximum	16	23	22	23	27	5	17	25	26	20	22	26	30	17	23	-19	-6	6	12	20	20	19	13	16	17	17	24	31	.....	.....	.....	19.1
	Minimum	-5	-4	14	18	-2	-9	-13	3	14	11	2	-1	12	-5	9	-18	-23	-17	-13	-5	-2	-5	0	-2	-4	3	1	0	.....	.....	.....	-1.9
Sharon	Maximum	15	20	27	31	32	20	16	19	25	20	18	24	29	25	28	-22	-8	9	17	16	16	16	20	1	0	-2	19	24	.....	.....	.....	20.4
	Minimum	8	2	17	19	20	-3	-8	6	16	-3	9	7	16	8	3	-13	-25	-24	-12	-2	2	-3	1	0	-6	9	-4	4	.....	.....	.....	1.6
Steele	Maximum	24	39	35	41	46	28	24	28	26	24	24	25	29	26	32	-25	-9	10	25	38	32	20	24	21	22	21	25	37	.....	.....	.....	26.5
	Minimum	12	5	20	15	18	10	0	0	16	7	7	4	19	19	10	0	-14	-30	-22	10	9	7	7	4	-2	-4	-9	1	.....	.....	.....	3.1
Valley City	Maximum	20	25	29	35	35	30	30	22	24	28	24	20	28	32	30	30	1	12	19	19	19	24	23	23	25	25	36	.....	.....	.....	24.9	
	Minimum	8	5	20	21	27	4	3	16	21	3	11	17	19	32	8	-7	-21	-17	-9	5	13	2	7	4	-2	12	3	1	.....	.....	.....	6.7
Wahpeton	Maximum	25	24	31	33	41	34	29	29	29	28	27	28	30	30	35	34	-2	11	20	23	26	26	25	23	27	25	27	41	.....	.....	.....	27.2
	Minimum	0	6	15	23	24	5	4	18	23	0	-2	17	18	17	12	-3	-18	-17	-8	1	11	1	9	3	3	11	8	.....	.....	.....	6.2	
Williston 1	Maximum	30	34	30	47	37	29	23	27	27	26	32	26	26	21	28	3	-6	18	24	29	22	18											

Daily Precipitation for February 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Cassellton	Red.		T.						.05	.10	.02		T.	.05	T.							.10											0.32
Cooperstown ²	Sheyenne			.02					.01	.02					T.							.02											0.07
Courtenay	James								T.		T.			T.								.20											0.20
Devils Lake ¹	Devils Lake	T.	.04	T.	T.	.04	T.		.04	.02	T.	T.	T.	.03	T.	.03	T.	T.	T.		.03	T.	T.	T.		T.	T.	T.					0.23
Edgeley	James														.05																		0.05
Edmore	Devils Lake	T.				.05			.01	T.	T.			T.			.05					T.					T.						0.11
Ellendale	James								.05	.04	T.	T.		.05		.08						.02											0.20
Fargo ¹	Red.	T.	.02	T.		T.	.01		.03	.04	T.	T.	T.	.03	.04	T.		T.	T.		.03	T.				T.	T.						0.22
Forman	Sheyenne	T.							.04	.06	T.	T.		.05		.02						T.	T.				T.						0.15
Fullerton	James	T.							.07	.03	T.	T.	T.	.06	.02	T.	.07					T.	T.				T.						0.25
Grafton	Red.	T.				.09			T.	.03	T.	T.	T.	.03	.02		.07	T.	T.			T.	T.			T.	T.						0.19
Grand Forks Airport ³	do.	.02	T.		.04	T.			.04	.05	.01	T.	T.	.03	.02		.03	T.	T.		.04	T.				T.	T.						0.28
Hankinson ²	do.								T.	.02	T.			T.		.05						T.	T.										0.07
Hannah	Pembina	T.	.02		T.	.06				T.	T.		T.	T.	.02							T.	T.		T.		T.						0.10
Hillsboro	Red.	T.	T.	.03					.10		T.	T.	T.	.03	.02		T.	T.	T.			.07	.01			T.	T.						0.26
Jamestown Airport ³	James	T.	T.		T.			.02	T.	T.	T.	T.	T.	.01	.01	T.	T.	T.	T.		T.	T.			T.	T.							0.04
Langdon	Pembina	T.	.01	T.	.02	.06	.03		.01	.05	.02	T.	T.	.01	.01		.03	T.				.01	T.			T.							0.26
Larimore	Red.		.05						T.	T.	.04		T.	T.								.05											0.14
Lisbon	Sheyenne	T.							.01	.05	.02	T.	T.	.02	.04	T.	.01					.01	T.										0.16
Mayville	Red.	.04							.05	.03	T.	T.	T.	.02								.13			T.		T.						0.27
McHenry	James	.03				T.			.01	.03		T.	T.	.02			.04					.03											0.16
McLeod	Sheyenne								.02	.10	T.		T.	.08	.18																		0.38
Oakes	James								.02	.02			T.	.01	.02		.05				T.												0.12
Park River	Red.		T.		.03				T.	.02	.02		T.	T.		.16	.02				.04	T.				T.							0.29
Pembina Airport	do.	T.	.01	.01	T.	.07	T.		.02	.05	.01	T.	.01	.04	T.	.02	.01	.02	.01		.01					.01	.01						0.31
Petersburg	do.								T.	.03			T.	T.												T.	T.						0.05
Sharon	do.	T.	.02	T.		T.			.01	.02	T.	T.	T.	.02							.03	T.				T.	T.						0.10
Valley City	Sheyenne	.02							.02	.03	T.	T.	T.	.15	.05		.05					.05	.05										0.42
Wanpeton	Red.	.01	T.						T.	.04	T.	T.		.02	.01		.01				T.	.01											0.10
Middle Division																																	
Ashley ³	Missouri	T.				T.			.01	.03	T.	.02		.01	T.	.05	T.	T.			T.	T.	T.	T.	T.								0.12
Bisbee	Devils Lake	T.	.02			.11			.06		.06			.05								T.	T.	T.	T.								0.24
Bismarck ¹	Missouri	T.	T.			T.	.02	.02	.02	.03			.01	.03	.06	.02	T.	.01	T.		T.	.01	.08	T.	T.	.01	T.						0.30
Bottineau ²	Mouse	.02			T.	.04	.03		.02					.02	T.		.02					.06	.02										0.16
Carrington	James								.11	.11												.02	.20	.40		T.							0.10
Carson	Heart								.11	.11												.02	.20	.40		T.							0.84
Center	Missouri				.01	T.		.01	T.		.04		.01	.04	.04							.01	.01	.30		T.							0.47
Dogden Butte	Mouse	T.			T.			T.	T.	T.				.10	T.	T.					T.	.06	T.	T.	T.	T.							0.16
Drake ²	do.		.02		.03	.02			.03	T.				.02	.02							.04	T.		.01								0.17
Dunseith	do.	T.		.04	.11				T.	.07				.03								.04	T.										0.29
Eckman	do.		.10	.06				.02	.01					.01								.02	.20	T.									0.42
Energy	Missouri	T.													.69							T.		.10	.08								0.27
Fessenden	James		.25		T.	.15			.10					.05		.15						.20											0.50
Fort Yates	Missouri							.20	.10		T.										T.				.40								0.70
Foxholm (near)	Mouse				.03	.05			.02	T.				.03	T.							.05	.01	.06	T.	T.							0.25
Gackle	James	T.							.08	.04				T.	.13																		0.25
Garrison ³	Missouri				.02	.03		.03	T.	T.				.07	.02	T.						.02	.17	.04	T.	T.							0.40
Granville	Mouse							.03						.03	T.									.01		T.							0.07
Hansboro	Devils Lake	T.				.05			.02	T.	T.			.02	T.																		0.09
Linton	Missouri					.01	.15	T.	.03	.01	T.			.05	T.	.10						T.	.05	.10									0.47
Maddock	Sheyenne	.04			T.	.03			.15	.03		T.	T.	.06								.02	T.				T.						0.18
Mandan ²	Missouri					.13	T.	T.	T.	T.	.03	.15	T.									.02	T.	.14									0.47
Max ²	do.							.02	T.					.05								.02		.06									0.15
McClusky	do.				.05				.05																								0.10
Minot ³	Mouse	.01			.13		T.	.03	T.	T.				.03	T.			T.	T.	T.	T.	.03	.07	T.	T.	T.	T.						0.30
Mohall	do.	T.		.04	.07			.03	T.					.02		.01						.05	.01	.02	T.	.02							0.27
Napoleon ²	Missouri							.15		.02				.02	.10		.08																0.37
New Salem	Heart							.05		T.	.02			.04	.20							.01		.10		.05							0.47
Pettibone	James	T.	T.			.11		.02	T.					.0																			

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., MARCH 1942 No. 3

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GENERAL SUMMARY

Except for the cold, stormy weather from the 25th to the 30th, March was a very pleasant month. Only seven previous years had a higher average temperature in March. Precipitation was mostly light until the 25th when heavy precipitation began and continued until the 29th. This moisture was mostly in the form of rain in the Red River Valley, but heavy snow fell in all other sections. Highways were blocked and considerable damage occurred to telephone and telegraph lines. The precipitation in the eastern section was the greatest ever recorded in March, and for the state it was the second greatest. High winds occurred on the 10th and from the 25th to the 28th, but little damage resulted and livestock came through the winter in very good condition. Winter rye is in better than average condition and supplies of both top soil and subsoil moisture are ample in all sections of the state.

TEMPERATURE

The mean temperature for the state was 30.0°, or 6.1° above the 1892-1942 average for March. The mean temperature for the eastern division was 31.2°; for the middle division, 29.7°; and for the western division, 29.1°. The highest mean temperature was 34.8° at Wahpeton, and the lowest, 23.5° at Hannah, making a range in mean temperature of 11.3°. The absolute range was 93°, from 66° at four stations in the middle division on the 22d, to -8° at Hannah on the 30th. The average daily excess in temperature for the state since January 1, 1942, is 7.4°.

PRECIPITATION

The average precipitation for the state was 1.83 inches, or 1.05 inches more than the 1892-1942 average for March. In the eastern division the average amount was 2.77 inches; in the middle division, 1.72 inches; and in the western division, 1.01 inches. The greatest monthly amount reported was 4.17 inches at Courtenay; the least was 0.30 inch at Dickinson Airport. The greatest amount recorded in any 24 consecutive hours was 1.62 inches at McVile on the 26th. The accumulated deficiency in precipitation for the state since January 1, 1942, is 0.56 inch. The average snowfall was 12.8 inches.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Auroras	5	4					1	1	2	10	6			3	4				4	7	13	4	1								
Dust storms											2																				
Fogs	1		1		2	3	3	6	2	2	4	24	27	9	17	4	5		1	1	1	3	7	3	1	2	4	28	19		
Lunar halos	1		3	2	2		2																								
Solar halos			1	4					1		1	1																			
Sleet			1		4	1			8				2	2	1		2					1	17	11	1						
Thunderstorms																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			Percentage of sunsh.
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	29.92	30.50	30	29.36	6	13.9	49	nw.	10	87	64	65	46
Devils Lake.....	29.88	30.45	30	29.31	6	10.4	33	n.	27	95	77	79	49
Fargo.....	29.86	30.46	30	29.38	6	11.7	35	nw.	26	88	67	68	45
Williston.....	29.96	30.51	30	29.36	6	8.9	34	nw.	10	86	68	66	48

† And other dates.

COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	24.2	66	-35	0.87	0.98	0.65	0.83	1.9	4	12	8	11	
1893...	13.9	68	-35	1.10	1.80	0.46	0.95	10.0	5	13		11	
1894...	24.8	69	-22	1.20	1.71	1.43	1.45	10.1	5	12	9	10	
1895...	23.2	75	-35	0.07	0.21	0.24	0.17	1.0	2	16	10	5	
1896...	15.7	70	-35	1.19	1.15	1.06	1.13	8.0	8	12	10	9	
1897...	11.9	58	-48	1.15	1.04	1.90	1.36	8.0	7	15		9	
1898...	21.3	79	-24	0.77	0.80	0.80	0.79	6.7	5	13	8	10	
1899...	7.5	72	-30	1.23	0.96	0.68	0.96	10.0	5	12	10	9	
1900...	20.3	77	-24	0.96	0.96	1.11	1.01	8.5	5	14	7	10	
1901...	25.3	85	-32	0.95	0.85	0.78	0.86	5.2	5	15	8	8	
1902...	27.4	65	-25	2.75	2.90	2.55	2.73	11.5	8	10	6	15	
1903...	22.1	80	-24	0.78	0.44	0.42	0.55	5.1	3	12	6	13	
1904...	18.2	64	-26	1.26	1.33	1.64	1.41	11.5	5	11	6	14	
1905...	32.5	81	-25	1.09	0.85	0.32	0.75	2.3	4	11	8	12	
1906...	18.5	67	-34	0.31	0.39	0.44	0.38	3.1	3	15	6	10	
1907...	23.1	83	-20	0.57	0.58	1.00	0.72	5.1	4	14	9	8	
1908...	21.1	68	-31	1.17	0.94	1.53	1.21	12.1	8	10	9	12	
1909...	24.0	61	-24	0.34	0.40	0.26	0.33	2.7	4	10	9	12	
1910...	41.3	90	-7	0.83	0.93	1.08	0.94	0.3	3	18	8	5	
1911...	30.6	78	-18	0.14	0.26	0.29	0.23	1.6	2	16	10	5	
1912...	15.4	65	-28	0.28	0.32	0.52	0.37	3.6	3	17	8	6	
1913...	17.2	70	-31	0.82	0.73	1.00	0.85	8.2	6	12	9	10	
1914...	25.5	76	-20	0.83	1.06	0.75	0.88	9.2	5	10	9	12	
1915...	22.9	63	-23	0.38	0.20	0.07	0.22	2.0	2	16	6	9	
1916...	20.3	69	-45	1.43	1.82	1.00	1.42	13.5	6	11	9	11	
1917...	22.2	67	-39	0.44	0.33	0.37	0.38	3.9	3	13	10	8	
1918...	35.0	82	-15	0.32	0.46	0.42	0.40	2.9	2	16	8	7	
1919...	17.8	67	-35	0.63	0.93	0.78	0.78	6.2	4	12	9	10	
1920...	22.4	67	-32	0.46	0.83	1.20	0.83	7.1	4	15	8	8	
1921...	25.2	75	-22	1.07	1.02	0.81	0.97	9.1	6	9	12	10	
1922...	25.8	80	-30	0.96	0.67	0.50	0.71	6.4	4	12	7	12	
1923...	18.3	65	-35	0.34	0.44	0.35	0.38	4.8	4	10	10	11	
1924...	25.5	58	-20	0.32	0.36	0.75	0.48	4.4	4	10	9	12	
1925...	27.4	75	-26	0.74	0.56	0.75	0.68	6.0	4	14	9	8	
1926...	25.8	83	-23	0.35	0.19	0.17	0.24	1.8	3	13	10	8	
1927...	30.4	77	-10	0.90	0.78	0.47	0.72	6.5	5	13	8	10	
1928...	28.1	85	-17	0.69	0.55	0.31	0.52	4.8	3	15	8	8	
1929...	30.5	77	-15	0.68	0.65	1.02	0.78	5.3	5	12	8	11	
1930...	26.1	62	-17	0.17	0.05	0.05	0.09	0.9	1	17	8	6	
1931...	25.7	63	-24	0.99	0.85	0.99	0.94	4.8	5	11	8	12	
1932...	18.9	64	-30	0.52	0.60	0.80	0.64	6.0	6	10	11	10	
1933...	28.5	70	-14	0.46	0.41	0.49	0.45	3.7	3	14	10	7	
1934...	26.3	74	-12	0.43	0.34	0.71	0.49	3.6	4	11	11	9	
1935...	26.3	75	-37	2.00	0.89	0.90	1.26	7.0	5	9	11	11	
1936...	25.4	61	-27	0.73	0.75	0.94	0.81	8.1	6	10	11	10	
1937...	24.8	72	-20	0.42	0.34	0.42	0.39	4.3	3	12	11	8	
1938...	33.1	72	-14	0.63	0.57	0.58	0.59	2.5	4	13	10	8	
1939...	23.3	81	-29	0.33	0.41	0.42	0.39	5.3	3	16	8	7	
1940...	23.1	64	-26	1.19	0.71	0.72	0.87	9.1	7	9	9	13	
1941...	24.5	68	-25	0.65	0.64	0.46	0.58	6.8	5	11	8	12	
1942...	30.0	66	-8	2.77	1.72	1.01	1.83	12.8	9	9	8	14	
Period	23.9	90	-48	0.82	0.77	0.75	0.78	6.0	4	12	9	10	

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Climatological Data for March 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days			Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	46	34.0	+9.3	62	23	16	27	2.69	+2.20	1.17	26	8.6	12	15	6	10	nw.	James. H. Erickson.
Cavalier	Pembina	894	32	27.8		49	16	0	1	3.49	+2.78	1.32	26	21.7	9	12	5	14	n.	City Light & Power Co.
Colgate	Steele	1,180	9							3.01		1.47	26	5.6	11	12	6	13	nw.	Wm. L. Haugen.
Cooperstown	Griggs	1,423	45	28.2	+3.9	57	24	0	1	3.16	+2.53	1.28	27	20.4	12	12	5	14	nw.	Theo. Marquardt.
Courtenay	Stutsman	1,523	12							4.17	+3.35	1.49	25	19.0	7	10	4	17	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	29.2	+9.4	56	22	10	27	2.14	+1.36	0.96	25-26	16.8	12	5	6	20	nw.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	33.0	+5.7	62	22	13	9	2.64	+1.93	1.22	25	12.9	8	3	16	12	nw.	O. A. Thompson.
Edmore	Ramsey	1,524	18	27.0	+5.9	50	22	1	11	2.26	+1.58	0.75	26	19.9	10	10	15	6	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	32.6	+5.4	63	23	9	26	2.96	+2.05	1.32	25	11.9	9	9	3	19	nw.	J. E. Demmer.
Fargo	Cass	895	15	33.8	+11.1	61	23	17	11	1.88	+0.87	0.98	25-26	3.6	11	5	8	18	nw.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	33.4	+7.4	61	23	12	28	2.46	+1.72	1.05	25	9.2	9	9	6	16	w.	Helge Dyste.
Fullerton	Dickey	1,439	44	32.8	+5.7	62	23	12	28	3.47	+2.27	1.28	25	16.9	9	7	7	17	nw.	F. O. Alin.
Grafton	Walsh	827	50	29.8	+8.1	50	23	7	12	3.78	+3.13	1.18	26	19.8	10	12	9	10	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	31.8	+9.3	58	23	9	11	2.76	+2.02	0.90	26	15.6	13	5	8	18	nw.	U. S. Weather Bureau.
Grand Forks Airport	Grand Forks	832	2	30.8		57	23	9	11	2.42		1.22	25	10.7	10	4	10	17	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	33.8	+5.2	62	23	4	1	2.64	+1.71	1.02	27	10.5	7	5	12	14	nw.	Joseph Rindt.
Hannah	Cavalier	1,568	50	23.5	+4.3	42	3	8	30	3.70	+3.01	1.30	26	24.7	7	11	7	13	nw.	A. E. Prior.
Hillsboro	Traill	901	42	33.2	+7.9	60	23	14	11	2.22	+1.47	1.01	25	7.1	11	9	7	15	nw.	Alfred Jahnke.
Jamestown	Stutsman	1,457	50	32.2	+7.8	62	22	11	28	1.79	+0.92	0.40	27	12.4	9	5	11	15	nw.	S. G. Calvelage.
Jamestown Airport	Stutsman	1,494	2	31.2		61	22	11	27	1.62		0.96	25	9.1	11	4	6	21	nw.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	31.1		51	22	4	28	2.34		0.89	26	15.3	11	5	13	13	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	27.2	+7.4	48	23	1	11	2.66	+1.86	0.80	26	22.7	12	13	6	12	n.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	31.2	+8.5	56	23	11	11	3.49	+2.72	1.27	26	14.4	12	7	6	18	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	34.5	+7.2	64	23	13	28	2.97	+2.33	1.19	25	9.3	11	9	2	20	nw.	J. O. Halverson.
Mayville	Traill	975	46	33.6	+8.9	59	23	12	30	2.82	+2.13	1.00	26	7.8	8	13	10	8	nw.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	28.7	+5.7	57	22	7	28	3.27	+2.62	1.30	26	17.0	11	8	6	17	nw.	C. E. Blasky.
McLeod	Ransom	1,075	31	32.0	+4.2	60	23	4	1	2.33	+1.62	0.83	26	4.9	9	10	12	9	nw.	J. G. Carlson.
McVile	Nelson	1,467	12							2.32		1.62	26	7.0	4	8	14	9	ne.	M. Kabeary.
Milnor	Sargent	1,117	3	32.6		60	23	12	1	3.90		1.10	26	5.0	8	12	14	5	nw.	E. W. Wilson.
Oakes	Dickey	1,318	13	32.2	+4.5	65	23	11	29	2.52	+1.68	1.02	25	9.2	8	10	3	18	nw.	F. H. Murray.
Park River	Walsh	998	38	29.2	+6.4	51	23	7	12	2.35	+1.73	0.83	26	18.4	7	14	7	10	nw.	E. J. Taintor.
Pembina Airport	Pembina	803	68	28.8	+10.4	52	23	7	11	2.68	+1.87	1.22	25	13.8	13	10	8	13	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12							2.49	+1.82	0.95	26	10.9	10	3	15	13	.....	T. M. Rykken.
Sharon	Steele	1,516	18	30.0	+5.8	56	23	12	28	2.90	+2.26	1.17	26	10.4	12	5	10	16	nw.	Nels O. Grefsheim.
Valley City	Barnes	1,245	36	33.5	+7.2	60	23	12	28	2.95	+2.28	1.35	26	20.7	11	11	7	13	nw.	I. C. Robertson.
Wahpeton	Richland	962	50	34.8	+7.2	59	23	16	27	2.44	+1.79	1.13	25	5.2	11	9	9	13	nw.	W. J. Cavanaugh.
Average for Eastern Division				31.2	+7.0	65	23	-8	30	2.77	+1.95	1.62	26	13.0	10	9	8	14	nw.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	29.9	+5.0	63	23	7	28	2.52	+1.73	1.02	26	19.2	9	6	5	20	nw.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	28							1.81	+1.20	0.50	27-28	17.3	14	0	20	11	nw.	R. T. Hamilton.
Bisbee	Towner	1,601	39	28.4	+5.9	53	23	6	12	1.49	+0.76	0.42	6	20.4	10	16	6	9	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,650	68	31.4	+7.2	66	22	4	1	1.18	+0.29	0.51	25-26	11.3	9	6	6	19	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	27.4	+6.6	59	22	3	30	2.49	+1.83	0.82	6	17.0	10	12	3	16	nw.	N. D. School of Forestry
Carrington	Foster	1,579	44	24.0	+5.3	63	22	5	1	2.20	+1.53	1.10	26	21.2	11	10	7	14	nw.	Soo Line Agent.
Carson	Grant	2,500	30	30.1	+3.1	66	22	6	2	2.70	+1.95	0.80	25	17.0	9	7	8	16	nw.	J. W. Evans.
Center	Oliver		4	30.0		62	22	2	1	1.90		0.48	27	.....	11	2	16	13	nw.	Fred L. Hein.
Dogden Butte II	McLean	1,880	16	30.4	+4.0	61	22	4	30	1.48	+0.63	0.64	25	11.0	7	4	7	20	nw.	R. L. Williams.
Drake	McHenry	1,634	13	29.1	+4.4	63	22	1	30	1.98	+1.53	0.65	26	13.7	9	11	4	16	nw.	H. G. Kringen.
Dunseith	Rolette	1,682	46	27.2	+6.7	54	22	7	1	2.28	+1.65	0.56	26	16.4	8	7	13	11	n.	Geo. Gehrs.
Eckman	Bottineau	1,500	37	28.7	+5.7	60	22	-4	30	1.79	+1.26	0.55	25	14.5	11	7	9	15	nw.	R. F. Nowak.
Energy II	McLean	1,750	27	30.6	+1.7	61	22	-1	1	0.95	+0.18	0.30	26	10.5	6	7	15	9	nw.	H. S. Solenberger.
Fessenden	Wells	1,610	30	30.2	+6.5	61	22	9	28	1.56	+0.81	0.42	25	12.5	9	9	9	13	n.	John V. Zuber.
Fort Yates	Sioux	1,670	42	33.6	+6.4	66	22	-1	1	1.21	+0.36	0.70	28	12.6	9	13	7	11	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	29.6	+4.2	62	22	3	30	1.81	+0.98	0.68	25	16.1	10	7	7	17	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	30.8		61	22	11	28	3.34	+2.55	1.25	26	23.5	8	8	9	14	nw.	A. H. Haut.
Garrison	McLean	1,925	65	29.4	+5.0	61	22	2	1	1.56	+0.71	0.56	25	16.5	10	6	10	15	nw.	E. L. Vorachek.
Grauville	McHenry	1,504	35	32.1	+7.6	61	23	0	1	2.05	+1.55	1.00	26	19.5	5	15	9	7	nw.	C. A. Stubbins.
Hansboro	Towner	1,597	34	27.2	+6.5	52	22	2	12	1.63	+0.69	0.48	25	14.3	7	12	6	13	nw.	W. E. Disher.
Leeds	Benson	1,515	2	29.7		58	22	1	1	2.30		0.48	26	17.0	7	12	3	16	n.	Carl T. Carlson.
Linton	Emmons	1,711	25	32.0	+4.0	65	22	8	1	1.03	+0.24	0.32	26	9.2	9	9	9	13	nw.	Wm. Heyerman.
Maddock	Benson	1,604	27	30.9	+6.6	64	22	7	30	1.58	+1.05	0.48	27	20.2	10	2	14	15	nw.	A. T. Felland.
Mandan	Morton	1,750	28	30.4	+3.6	66	22	-4	1	0.79	-0.06	0.22	25	7.8	6	9	4	18	nw.	No. Gt. Plains Field Sta.
Manfred	Wells	1,605	39							1.44	+0.71	0.50	25	15.3	9	11	3	17	nw.	P. B. Anderson.
Max	McLean	2,093	13	26.8	+2.3	51	22	0	1	1.82	+1.02	0.50	25	15.0	10	13	3	15	nw.	A. W. Rice.
McClusky	Sheridan	1,943	24	30.2	+4															

Climatological Data for March 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha	Golden Valley	15	15	30.9	+2.7	61	22	10	7	0.73	-0.13	0.33	24	8.3	8	16	5	10	nw.	H. A. Bury.
Amidon	Slope	2,908	19	32.8	+5.2	61	22	11	29	0.40	-0.87	0.16	25	4.7	8	11	10	10	nw.	Stanley W. Bale.
Beach	Golden Valley	2,759	36	32.8	+5.2	61	22	11	29	0.94	+0.18	0.35	24	9.6	10	0	16	15	nw.	J. C. Russell.
Berthold Agency #1	McLean	2,082	48	30.8	+4.6	60	22	4	1	1.01	+0.45	0.40	26	16.8	8	6	9	16	nw.	H. W. Case.
Bowbells	Burke	1,958	13	26.4	+7.2	60	22	4	1	1.23	+0.72	0.49	24	10.2	10	9	6	16	w.	Charles Kaufman.
Bowman	Bowman	2,872	27	28.6	+0.3	61	22	2	1	0.73	+0.06	0.30	15	2.5	7	10	3	18	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	33	28.8	+5.0	61	22	3	2	0.47	-0.20	0.21	25	5.7	5	6	8	17	nw.	J. H. Phelps.
Dickinson	Stark	2,543	49	28.0	+2.5	62	22	5	1	0.54	-0.20	0.16	25	8.6	11	5	9	17	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,583	2	29.2	.....	62	22	12	2	0.30	.....	0.16	24	3.1	7	2	14	15	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	29.0	+3.0	61	22	7	1	0.65	-0.18	0.17	25	8.5	8	7	7	17	nw.	O. T. Evenson.
Epping	Williams	2,224	31	28.6	+1.6	60	22	3	2	0.95	+0.36	0.36	25	9.7	8	16	5	10	nw.	T. Beachler.
Fairfield	Billings	.....	5	.....	.....	.....	.....	.....	.....	1.08	+0.31	0.35	15	8.3	8	10	10	11	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,730	23	29.4	.....	62	22	9	29	1.05	+0.27	0.31	24	8.3	10	7	6	18	nw.	Verne King.
Golva	Golden Valley	2,780	2	29.0	.....	61	22	8	2	0.48	.....	0.29	24	6.3	9	1	14	16	w.	U. S. Airway Comm. Sta.
Halfway	Dunn	2,073	2	.....	.....	.....	.....	.....	.....	1.70	.....	0.42	28	17.1	9	8	7	16	w.	Thom. C. Lorenzen.
Hettinger	Adams	2,675	34	30.6	+1.7	65	22	4	1	0.86	+0.16	0.38	15	7.6	7	10	14	7	nw.	C. J. Austad.
Howard #1 (near)	Williams	2,275	34	26.9	+4.5	61	22	4	1	1.57	+0.67	0.60	24	13.0	5	9	7	15	nw.	C. P. Amsbaugh.
Kenmare	Ward	1,799	10	28.4	.....	63	22	0	1	1.95	+1.32	0.57	25	19.3	10	14	8	9	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	31.3	+2.5	62	12	2	2	1.06	+0.34	0.51	25	10.5	10	10	9	12	nw.	S. P. Grane.
Mary	McKenzie	2,271	13	.....	.....	.....	.....	.....	.....	0.66	+0.10	0.18	25	12.3	7	10	9	12	nw.	Fred Hartman.
Medora	Billings	2,424	34	29.8	+2.2	64	22	5	2	0.59	-0.34	0.30	25	5.2	9	5	7	19	nw.	Vernon Thompson.
Mott	Hettinger	2,400	47	30.1	+4.0	64	22	7	1	0.94	+0.16	0.22	24	11.0	10	9	10	12	nw.	P. G. Wick.
New England	Hettinger	1,929	26	26.9	.....	61	22	7	1	0.91	+0.40	0.32	25	8.8	11	3	20	8	nw.	F. S. Sleight.
Parshall	Mountrail	2,954	36	27.0	+8.6	61	22	2	1	1.16	+0.56	0.75	24	7.7	6	9	9	13	nw.	C. E. Shubert.
Portal	Burke	2,205	36	28.8	+3.3	62	22	11	29	1.09	+0.40	0.31	24	18.0	7	12	11	8	e.	R. G. Wegener.
Powers Lake	Burke	2,467	25	29.3	+2.1	61	22	7	1	0.50	-0.22	0.10	24	5.6	10	8	7	16	nw.	Geo. R. Gee.
Richardton	Stark	1,835	16	27.2	+2.4	58	22	6	1	2.09	+1.51	0.75	25	15.0	12	9	7	15	.....	Assumption Abbey.
Sanish	Mountrail	2,258	4	27.0	.....	58	22	2	30	1.27	.....	0.69	25	10.2	7	11	10	10	w.	H. J. Bugge.
Stanley	Mountrail	2,279	13	.....	.....	.....	.....	.....	.....	1.35	+0.72	0.80	25	11.5	6	12	5	14	nw.	Leroy Edwards.
Tioga	Golden Valley	1,864	2	29.2	.....	63	22	0	1	0.83	.....	0.30	25	7.3	12	12	10	9	w.	B. V. Olson.
Trotters	Mountrail	2,084	28	30.1	+3.9	62	22	9	1	1.80	+1.12	0.62	25	21.5	11	7	12	12	nw.	Walter Grunewald.
Van Hook	McKenzie	2,253	14	.....	.....	.....	.....	.....	.....	0.65	-0.04	0.32	25	7.2	9	12	7	12	nw.	Soil Conservation Serv.
Watford City	Williams	1,878	62	30.4	+7.5	62	22	5	30	1.12	+0.43	0.52	24-25	11.5	13	11	8	12	nw.	J. C. Zoller.
Wildrose	Williams	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. Holter.
Williston	Williams	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Average for Western Division				29.1	+3.6	64	22	7	1	1.01	+0.26	0.80	25	10.2	9	9	9	13	nw.	.....
Average for the State				30.0	+6.1	66	22	8	30	1.83	+1.05	1.62	26	12.8	9	9	8	14	nw.	.....

Daily Temperatures for March 1942

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum	45	45	44	47	46	39	41	43	42	41	33	42	36	35	31	34	36	48	45	39	52	62	63	45	37	21	19	17	26	33	40	39.6	
	Minimum	10	16	22	20	20	25	18	24	10	25	19	18	31	28	27	26	29	19	24	22	18	24	25	23	17	14	8	7	16	18	24	20.2	
Beach	Maximum	38	45	43	41	45	42	40	43	50	45	42	49	50	39	39	33	42	42	45	42	40	54	61	57	33	35	27	28	41	55	42.0		
	Minimum	20	12	25	18	26	27	20	26	26	32	20	28	32	32	28	28	25	27	27	25	32	30	27	21	23	16	17	14	11	12	23	23.5	
Bismarck ¹	Maximum	38	42	43	44	44	38	41	44	39	44	40	49	42	39	42	35	40	50	46	42	54	66	54	41	32	26	21	21	29	31	52	40.6	
	Minimum	1	14	25	22	25	30	26	28	20	27	25	23	31	31	29	28	27	21	25	24	20	22	26	23	20	17	13	13	16	12	19	22.1	
Bottineau ⁵	Maximum	38	39	43	41	38	34	35	40	39	34	32	39	42	39	40	35	41	42	41	41	50	59	38	26	26	24	15	27	33	29	40	36.8	
	Minimum	14	5	13	20	20	25	24	15	9	18	17	16	17	16	17	28	27	18	22	22	21	24	33	16	15	14	12	10	10	3	7	17.9	
Carson	Maximum	40	42	40	40	40	39	38	45	38	42	44	45	39	35	34	33	36	48	42	42	55	66	54	32	28	25	24	28	25	35	54	39.6	
	Minimum	7	6	23	17	21	28	19	25	25	27	22	21	28	28	27	28	22	19	27	22	30	30	23	16	14	14	10	11	18	18	20.6		
Crosby	Maximum	33	35	37	37	38	38	38	39	36	37	37	48	51	42	36	36	41	56	41	42	53	61	54	22	23	27	24	18	29	37	53	38.7	
	Minimum	7	3	11	20	15	28	16	12	22	21	7	16	28	32	29	27	25	33	28	23	25	30	18	16	11	14	13	12	15	6	23	18.9	
Devils Lake ¹	Maximum	39	42	43	41	42	35	32	38	40	33	30	41	40	40	32	34	36	44	39	38	47	56	49	30	32	23	15	27	31	39	36.4		
	Minimum	17	18	29	25	25	26	19	24	18	24	15	14	25	31	29	27	28	23	30	30	25	27	24	20	23	14	10	11	18	15	17	22.0	
Dickinson Airport ³	Maximum	34	38	38	41	36	36	40	43	40	42	43	38	53	31	35	37	46	41	39	52	62	45	27	22	25	25	20	26	32	54	37.4		
	Minimum	15	12	22	17	21	25	13	23	25	22	17	28	28	28	27	24	21	26	26	24	25	30	26	18	15	15	14	14	13	19	20	21.1	
Dunn Center	Maximum	38	40	39	40	41	36	36	40	41	38	42	50	38	37	35	38	40	48	43	41	54	61	51	33	22	26	25	22	27	35	54	39.1	
	Minimum	7	4	18	17	19	27	10	20	31	24	13	21	24	31	27	25	26	20	24	21	23	26	25	19	15	16	15	13	12	19	17	18.9	
Fargo ¹	Maximum	46	45	49	47	41	43	35	40	41	41	32	47	41	45	35	36	36	47	47	37	47	55	61	48	50	47	32	26	31	37	41	42.2	
	Minimum	21	20	29	29	28	31	23	28	23	28	17	21	33	30	31	27	31	25	26	26	24	20	34	24	36	18	18	21	24	22	25.4		
Fessenden	Maximum	41	45	46	44	42	41	35	41	4	43	30	46	43	43	33	38	49	42	39	53	61	52	38	31	24	18	19	30	33	43	39.5		
	Minimum	13	17	27	21	21	28	19	24	17	28	23	15	25	30	29	26	29	20	27	24	20	23	27	20	23	15	13	9	14	6	17	21.0	
Fullerton	Maximum	47	47	47	49	49	47	39	44	45	47	33	47	45	40	37	34	36	43	47	44	52	60	62	52	42	33	19	18	30	32	40	42.2	
	Minimum	16	20	17	25	25	31	23	25	15	25	22	18	32	32	30	24	31	23	27	26	22	23	25	24	32	18	15	12	17	24	28	23.5	
Garrison ³	Maximum	38	34	40	40	39	34	38	42	38	39	38	46	45	39	33	37	42	48	46	41	53	61	42	24	23	26	24	19	31	36	52	38.3	
	Minimum	2	11	24	21	22	28	18	22	2	2	25	22	22	27	31	25	23	26	22	28	23	23	25	24	21	18	15	13	12	14	7	15	20.4
Grafton	Maximum	40	44	42	43	41	32	31	36	39	38	32	33	37	43	40	37	36	41	41	39	43	47	50	43	36	38	21	28	28	37	42	38.0	
	Minimum	12	23	28	29	26	14	19	9	20	13	7	19	30	27	30	27	30	19	23	29	24	24	31	21	30	14	17	16	14	19	18	21	21.7
Grand Forks Airport ³	Maximum	41	42	42	44	39	38	32	38	40	33	33	40	38	43	35	36	35	42	44	40	44	49	57	37	44	44	28	31	27	33	39	39.0	
	Minimum	20	22	28	27	29	28	17	25	20	19	9	10	26	31	29	28	30	23	26	30	27	22	27	21	31	17	17	16	18	10	15	15.0	
Jamestown Airport ³	Maximum	47	50	47	49	47	41	39	45	44	44	30	45	40	42	32	36	37	50	47	39	54	61	59	45	35	24	19	19	29	36	40	41.0	
	Minimum	17	17	19	22	23	29	19	21	13	24	19	13	32	32	30	26	30	21	27	23	21	20	26	22	24	17	11	11	17	21	21	21.5	
Kenmare ⁵	Maximum	35	40	40	41	40	34	37	41	38	38	40	50	45	38	39	37	45	48	44	45	57	63	39	20	23	27	23	20	30	28	51	38.9	
	Minimum	0	12	12	21	21	20	15	15	15	15	10	18	13	30	30	26	27	21	25	23	23	27	28	16	15	14	14	11	11	4	4	17.8	
Langdon	Maximum	37	44	44	40	39	37	31	40	39	35	32	32	38	37	37	41	41	42	41	42	45	44	48	32	34	33	19	25	37	39	39	37.5	
	Minimum	15	15	27	22	26	27	8	18	4	15	1	7	12	27	22	23	27	7	21	27	13	22	30	16	23	14	11	8	17	11	9	16.9	
Marmarth	Maximum	38	42	40	42	39	38	40	46	51	42	46	62	52	38	35	33	45	38	42	42	55	62	58	36	25	28	29	28	30	38	58	41.9	
	Minimum	1	2	25	15	20	27	15	30	26	30	20	40	18	32	28	25	25	26	28	25	19	26	29	23	16	16	11	13	10	11	16	20.7	
Minot ³	Maximum	41	44	43	43	43	38	36	43	39	39	39	49	42	41	38	34	43	50	43	42	55	62	37	25	23	26	21	18	28	36	51	39.1	
	Minimum	10	14	28	18	22	26	15	24	17	26	23	19	25	32	28	27	32	18	27	20	18	27	23	17	17	14	11	11	15	0	15	19.7	
Mott	Maximum	39	42	40	42	45	42	38	43	42	41	46	46	41	36	32	35	37	49	42	40	54	64	51	36	26	25	24	28	32	56	40.0		
	Minimum	14	5	9	6	35	25	15	26	25	10	19	27	27	27	30	28	22	17	23	26	25	20	27	26	24	14	12	11	13	12	13	19.6	
Pembina Airport ³	Maximum	38	42	41	40	33	31	30	33	39	30	31	38	43	43	39	37	35	42	48	39	41	45	52	38	38	35	23	32	28	32	41	37.3	
	Minimum	18	23	29	27	21	23	10	16	11	12	7	11	19	31	27	30	29	20	20	29	27	24	23	19	30	16	15	15	17	15	20	20.3	
Sharon	Maximum	41	43	41	43	42	39	31	38	40	34	33	42	38	40	36	37	35	44	41	38	46	53	56	43	35	35	21	25	31	33	39	38.5	
	Minimum	1	18	27	24	23	29	17	23	13	27	14	17	17	30	28	28	29	21	27	21	23	23	33	19	29	15	13	12	22	14	21	21.5	
Steele	Maximum	40	44	43	44	43	42	40	43	43	42	43	43	45	43	43	35	34	36	49	46	40	53	63	56	42	33	21	19	18	27	32	41	39.8
	Minimum	7	13	22	18	16	28	16	24	12	26	23	20	28	30	27	25	27	18	20	20	13	21	25	21	21	14	11	8	12	13	14	19.1	
Valley City	Maximum	45	45	45	46	47	47	41	42	43	43	36	45	45	43	43	35	36	47	48	45	50	60	60	58	39	38	27	26	33	42	40	43.2	
	Minimum	29	19	22	25	25	32	21	27	16	28	18	20	34	32	30	29	30	20	27	26	24	18	33	22	32	20	15	12	19	20	23	23.8	
Wahpeton	Maximum	47	47	50	50	49	47	42	40																									

Daily Precipitation for March 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton	Red						.05	.05	.04		.06	.01		.17	T	.10	.01		T								.83	1.17	.17	.03	T		2.69	
Cooperstown ²	Sheyenne						.06	.02	.03		.09			T	.02	.02	.11										.16	.77	1.28	.30	.30		3.16	
Courtenay	James						.08				.31					.09	.02	T								.149	.41	.50	.27	.11		4.17		
Devils Lake ¹	Devils Lake		T	T	.07		.06	.02	.01	T	.34	T			T	.09	.02	T				T			T		.80	.40	.12	.19	.02	T	2.14	
Edgeley	James						.06				.04			.21	T	.10	.21										.122	.44	.25	.17			2.64	
Edmore	Devils Lake					.16		.08	.02		.15					.05	.14										.58	.75	.08	.25			2.26	
Ellendale	James						.03				T	T		.32		.19											.132	.88	.13	.05	.03	.01	2.96	
Fargo ¹	Red			T	T	.09	.01	.05		.08	T		.12		.06	.01	T	T				T					.94	.45	.05	.02	T	T	1.88	
Forman	Sheyenne						T	T	T		.04	.05		.30		.08	T	.02	T								.105	.55	.32	.05			2.46	
Fullerton	James						T		.02				.27	T	.13	.17											.128	.88	.48	.22	T		2.46	
Grafton	Red						.20	.08			.30	.04				T	.25										.68	1.18	.41	.32	.32		3.78	
Grand Forks Airport ³	do			T		T	.05	T	T		.19			.01	T	.08	.03	T				T					.122	.55	.15	.09	.05		2.42	
Hankinson ²	do									T				.14	.07	.08				T							.30	.94	1.02	.09			2.64	
Hannah	Pembina						.46				.54					.10				T		T			T		.45	1.30	.55	.30			3.70	
Hillsboro	Red			T		T	.05				.01	.10		.16	.02	.08	.05	T									.101	.49	.23	.02	T		2.22	
Jamestown Airport ³	James						T	.01		T	.01			.06	T	.02	.01	.01									.96	.42	.07	.04	.21	T	1.62	
Langdon	Pembina						.31	.03	.02		.21					.02	.16	.01									.36	.80	.30	.34	.10		2.66	
Larimore	Red						.20	.05	.05		.10	.05				.10	.26										.70	1.27	.12	.52	.07		3.49	
Lisbon	Sheyenne				.02		.02	T	T		.04	.03		.22	.02	.11	.04	T	T								.119	1.12	.16	T			2.97	
Mayville	Red									T	.50			.11		.03											.78	1.00	.25	.10	.05		2.82	
McHenry	James					.13	.01	.02		.12	T				.06	.03											.74	1.30	.39	.37	.10		3.27	
McLeod	Sheyenne				.06						.07	.06		.23		.13											.59	.83	.27	.09			2.33	
Oakes	James						T				.04			.25		.07	.03	T									.102	.87	.06	.18			2.52	
Park River	Red					.16	T				.35					.21	T										.57	.83	.12	.11			2.35	
Pembina Airport	do	.01		.01	.01	T	.19		.01		.19	T				.04	.15	.01		T	T						.122	.54	.14	.16	T		2.68	
Petersburg	do			T			.25		.04		.15					.02	.04	T									.45	.95	.20	.26	.13		2.49	
Sharon	do					.09	T	.04		.08	T			.01		.02	.15	.02									.94	1.17	.18	.06	.09		2.90	
Valley City	Sheyenne					.03	.01	T		T	.09			.09		.06	.09	T	T								.73	1.35	.46	.01	.03		2.95	
Walhapon	Red					.01	T	.05		.02				.15		.03	.05	T	.01								.113	.86	.11	.02			2.44	
Middle Division																																		
Ashley ³	Missouri			T			T				.02	T	.03	.17	.03	.03	T	T									.61	1.02	.50	.11	T		2.52	
Bisbee	Devils Lake						.42				.01	T				.08	T										.16	.17	.08		T		1.49	
Bismarck ¹	Missouri			T			.02	T	T		.01	T			T	.04	T	T									.44	.30	.23	.07	.03		1.18	
Bottineau ²	Mouse						.82				.25	.23					.05										.45	.15	.18	.08	.18		2.49	
Carrington	James					.03	.02	.04		.02	.18					T	.05										.19	1.10	.34	.15	.08	.02	2.20	
Carson	Heart					.06	T		.02	.01				.09		.10	.02										.40	.80	.80				2.70	
Center	Missouri			T			.06			.03	.08	T				.16	.04	T									.40	.45	.48	.15	.03	T	1.90	
Dogden Butte	Mouse					.08	T	T		.09	T					.05	.07										.61	.34	.21	T			1.48	
Drake ²	do						.08				T	.17				.08											.31	.65	.37	.23	.08		1.98	
Dunseith	do			T	T		.36	T		.53						.04			.01			.01					.48	.56	.12	.15			2.28	
Eckman	do					.34	.09	T		.15	.02	T				.01	.05			T							.03	.55	.25	.15	.15	T	1.79	
Energy	Missouri						T			.10						.20											.07	.20	.30	.08			0.95	
Fessenden	James				.10	.10	.05			.15						.12											.42	.38	.15	.09			1.56	
Fort Yates	Missouri						.06	.01		.08	T		.11	T	.25	.05	.10										.70	.125	.65	.30	T		1.21	
Foxholm (near)	Mouse					.06	.01			.08	T					.13											.07	.68	.58	.14	.02		1.81	
Gackle	James						.04			.04				.05	T	.08	.27	T									.70	.125	.65	.30	T		3.34	
Garrison ³	Missouri					.08	T			.04						.19			.01								.07	.56	.23	.23	.13	.02		1.56
Granville	Mouse					.03				T						T											.05	.67	1.00	.30	T		2.05	
Hansboro	Devils Lake			T			.11				.40					T	.04										.48	.32	.25	.03			1.63	
Liuton	Missouri					.01				.09			.03	T	.05	.05											.28	.22	.48	.13	.03		1.03	
Maddock	Sheyenne				.12	T	T			.16	T				.06	.07	T		.03								.28	.22	.19	.05	.02	T	0.79	
Mandan ²	Missouri						T			T	T				.09	T	T										.22	.22	.19	.05	.02	T	1.44	
Max ²	do				.03	.07				T	.07				.09												.15	.50	.18	.27	.08		1.82	
McClusky	do					T	.07	.05		T	.07	.02			.15	.08											.30	.45	.25	.20	.05		1.69	
Minot ³	Mouse			T		T	.07	.01		.05	T				.05	T			.01								.31	.33	.25	.38	.22	.01	2.30	
Mohall	do																																	

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

DEC 6 1942
UNIVERSITY OF ILLINOIS

DEC 8 1942 NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., APRIL 1942 No. 4

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Temperature and precipitation were above normal in all sections of the state. Only a few stations reported subzero temperatures and minimum temperatures below freezing did not occur after the 17th of the month at most stations. The precipitation was well distributed both geographically and throughout the month. It was less than in April 1941 in the eastern and western divisions, but more was reported in the central division than in April 1941. Considerable snow fell between the 5th and 9th. No severe storms were reported. Farm work was seriously delayed in some sections by wet weather and some fields and highways in the northeastern part of the state were under water during the first part of the month. Livestock were in very good condition.

TEMPERATURE

The mean temperature for the state was 44.9°, or 3.4° above the 1892-1942 average for April. The mean temperature for the eastern division was 45.3°; for the middle division, 44.6°; and for the western division, 44.8°. The highest mean temperature was 50.4° at Fort Yates and Linton, and the lowest, 39.5° at Hannah, making a range in mean temperature of 10.9°. The absolute range was 96°, from 90° at Amidon on the 14th, to -6° at McHenry on the 8th. The average daily excess in temperature for the state since January 1, 1942, is 6.4°.

PRECIPITATION

The average precipitation for the state was 1.96 inches, or 0.51 inch more than the 1892-1942 average for April. In the eastern division the average amount was 2.12 inches; in the middle division, 1.75 inches; and in the western division, 2.01 inches. The greatest monthly amount reported was 4.24 inches at Fargo; the least was 0.50 inch at Park River. The greatest amount recorded in any 24 consecutive hours was 1.79 inches at Fargo on the 27th. The accumulated excess in precipitation for the state since January 1, 1942, is 1.07 inches. The average snowfall was 3.3 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Auroras		1	1				3	2	1	3	1				2	4	3	1	1					1							
Dust storms																	1						1								
Fogs	2	4		2		4		3	3								1	2	3	9			1	10	10			4	5		
Lunar halos ..	2	1																				1									
Solar halos ..	3	3						1							2		1					1									
Sleet								1																							
Thunderstorms ..	1							1				5	2	1								1			2	13	2	6		13	10

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	29.92	30.49	7	29.28	14	13.1	36	se.	17	84	58	54	59
Devils Lake.....	29.94	30.44	19	29.31	14	10.8	26	n.w.	16	87	64	65	62
Fargo.....	29.95	30.49	8	29.27	27	14.7	45	n.	27	81	57	56	59
Williston.....	29.90	30.51	7	29.19	22	9.5	29	se.	17	80	56	50	54

† And other dates.

COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	37.6	75	-2	2.58	3.09	2.29	2.65	6.3	7	10	6	14	
1893...	34.3	77	-8	2.45	1.56	1.09	1.70	7.8	6	7	8	14	
1894...	42.8	92	12	3.66	2.93	2.50	3.03	4.4	9	8	10	12	
1895...	49.6	87	10	2.10	2.38	2.20	2.23	0.0	5	13	8	9	
1896...	40.1	92	2	5.50	3.73	2.18	3.80	5.1	9	9	8	13	
1897...	40.8	93	7	0.80	1.20	1.24	1.08	1.1	5	12	8	10	
1898...	41.9	87	-4	1.38	1.36	1.40	1.38	0.5	5	14	8	7	
1899...	38.0	86	-22	1.46	1.31	1.31	1.36	0.5	6	12	10	8	
1900...	49.3	93	11	0.75	0.75	1.05	0.85	T.	3	20	6	4	
1901...	44.5	92	10	1.40	0.72	0.82	0.98	0.3	4	12	9	9	
1902...	40.2	87	-2	1.35	0.88	0.95	1.06	2.9	3	12	8	10	
1903...	42.5	83	8	1.67	1.10	0.92	1.23	2.7	5	16	6	8	
1904...	37.4	81	2	2.22	1.21	0.72	1.38	8.1	5	13	5	12	
1905...	40.2	83	3	1.04	0.38	0.11	0.51	3.7	3	15	8	7	
1906...	46.7	88	-8	1.96	1.06	1.48	1.50	1.3	5	14	7	9	
1907...	31.9	80	-6	0.77	0.36	0.44	0.52	4.2	4	10	9	11	
1908...	43.9	91	-19	1.12	1.53	1.91	1.52	5.9	5	16	6	8	
1909...	34.2	80	3	0.95	0.71	0.64	0.77	5.1	6	10	9	11	
1910...	48.0	96	4	1.52	1.03	1.56	1.37	2.9	4	16	8	6	
1911...	41.5	90	-5	2.12	0.80	0.64	1.19	6.3	5	15	6	9	
1912...	44.4	88	2	2.61	2.32	2.22	2.35	1.7	7	14	8	8	
1913...	46.8	94	11	1.00	0.70	0.23	0.64	2.4	4	16	6	8	
1914...	40.9	84	2	2.49	1.31	0.58	1.46	2.8	6	9	10	11	
1915...	50.3	99	5	1.42	0.98	0.68	1.03	T.	5	15	8	7	
1916...	39.2	79	-6	1.70	1.07	1.54	1.44	2.9	5	10	10	10	
1917...	37.2	73	5	1.89	1.67	1.49	1.68	5.6	7	9	9	12	
1918...	41.4	81	0	2.38	1.87	2.28	2.18	3.0	7	12	8	10	
1919...	34.2	79	6	1.45	1.40	1.72	1.52	6.2	6	11	9	10	
1920...	32.1	63	-11	0.73	0.67	1.12	0.84	2.1	5	13	8	9	
1921...	41.1	91	1	1.84	2.07	1.40	1.77	3.8	7	14	7	9	
1922...	42.3	89	-2	1.17	0.79	0.79	0.92	2.3	6	10	9	11	
1923...	38.7	89	-15	1.22	1.63	1.51	1.45	7.2	5	13	8	9	
1924...	39.3	84	6	3.94	2.31	1.35	2.53	7.5	9	8	9	13	
1925...	47.8	85	10	2.21	1.37	1.22	1.60	T.	6	11	10	9	
1926...	42.8	98	-4	0.17	0.34	0.32	0.28	0.9	3	17	8	5	
1927...	41.4	95	7	2.05	1.46	1.67	1.73	2.3	7	10	8	12	
1928...	35.9	84	-6	0.92	0.88	0.92	0.91	5.0	5	12	10	8	
1929...	41.5	85	-9	1.68	1.36	0.88	1.31	3.4	6	12	9	9	
1930...	47.3	86	8	1.16	1.14	1.45	1.25	0.5	6	14	7	9	
1931...	44.1	87	3	0.75	0.37	0.18	0.43	0.7	2	18	8	4	
1932...	44.1	79	0	2.50	2.09	1.84	2.14	0.7	8	9	9	12	
1933...	40.0	84	2	1.44	1.20	1.35	1.33	7.3	5	11	9	10	
1934...	43.7	95	7	0.75	0.34	0.24	0.44	1.9	3	15	8	7	
1935...	38.4	83	0	2.62	1.75	1.42	1.93	3.6	8	9	9	12	
1936...	35.6	87	-15	0.53	0.26	0.37	0.39	0.5	4	14	10	6	
1937...	40.7	79	2	3.44	1.56	1.06	2.02	5.8	8	8	9	13	
1938...	42.8	90	1	1.68	0.96	0.64	1.09	0.1	5	11	10	9	
1939...	41.6	90	-1	0.93	0.66	1.03	0.87	0.8	6	12	9	9	
1940...	37.8	78	-9	1.84	2.36	2.45	2.22	4.1	8	7	10	13	
1941...	44.1	82	6	3.05	2.13	1.71	2.30	1.6	13	6	9	15	
1942...	44.9	90	-6	2.12	1.75	2.01	1.96	3.3	7	11	9	10	
Period	41.5	99	-22	1.77	1.35	1.24	1.45	3.2	6	12	8	10	

Climatological Data for April 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	46	48.5	+6.9	84	24	7	8	2.34	+0.67	0.67	27	3.0	6	13	9	8	sw.	James. H. Erickson.
Cavalier	Pembina	894	32	43.5	.....	78	22	17	5	1.41	+0.06	0.60	28	0.5	5	11	7	12	se.	City Light & Power Co.
Colgate	Steele	1,180	9	.....	.....	.....	.....	.....	.....	1.90	.....	0.45	27	12.0	7	7	14	9	nw.	Wm. L. Haugen.
Cooperstown	Griggs	1,428	45	44.0	+3.7	78	14†	.....	.....	2.36	+0.97	0.56	5	5.6	7	21	3	6	nw.	Theo. Marquardt.
Courtenay	Stutsman	1,523	12	.....	.....	.....	.....	.....	.....	1.85	+0.29	0.52	27	7.0	8	5	18	7	s.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	42.8	+4.0	81	22	15	8	0.63	-0.89	0.21	5-6	2.7	10	2	11	17	se.	U.S. Weather Bureau.
Edgeley	LaMoure	1,568	41	47.6	+5.0	85	14	11	8	2.34	+0.57	1.65	27	3.0	7	4	22	4	se.	O. A. Thompson.
Edmore	Ramsey	1,524	18	42.0	+2.7	77	22	15	5†	1.05	-0.17	0.52	27	3.0	5	12	13	4	se.	Mike Davis.
Ellendale	Dickey	1,457	47	47.2	+4.5	86	14	17	26	2.36	+0.57	1.40	27	2.5	6	15	6	9	s.	J. E. Denner.
Fargo	Cass	895	15	47.8	+7.2	85	23	6	8	4.24	+2.06	1.79	27	4.9	6	4	14	12	s.	U.S. Weather Bureau.
Forman	Sargent	1,249	49	48.2	+4.2	80	14†	17	7†	2.14	+0.27	1.35	27	2.3	6	21	5	4	s.	Helge Dyste.
Fullerton	Dickey	1,439	44	47.2	+4.5	84	14	15	8	3.20	+1.06	1.66	27	2.8	6	14	10	6	s.	F. O. Alin.
Grafton	Walsh	827	50	45.8	+5.2	79	23†	18	5	1.99	+0.75	0.85	29	T.	4	9	18	3	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	46.1	+4.8	81	23	15	5	2.29	+0.67	0.64	30	1.7	7	13	11	6	se.	U.S. Weather Bureau.
Grand Forks Airport	Grand Forks	832	2	44.6	.....	81	23	16	5	2.10	.....	0.99	27	2.2	6	5	13	12	se.	U.S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	48.0	+4.5	85	14†	15	8	1.79	-0.36	0.82	28	6.0	4	16	6	8	sw.	Joseph Rindt.
Hannah	Cavalier	1,568	50	39.5	+1.6	76	22	10	6	1.75	+0.71	0.60	28	0.0	6	7	13	10	se.	A. E. Prior.
Hillsboro	Trall	901	42	47.4	+4.2	84	23	6	8	2.12	+0.28	1.16	28	7.0	4	11	11	8	ne.	Alfred Jahnke.
Jamestown	Stutsman	1,457	50	46.6	+4.9	82	14†	1	8	3.46	+1.88	1.16	27	9.0	6	10	7	13	ne.	S. G. Calvelage.
Jamestown Airport	Stutsman	1,494	2	44.0	.....	82	14	1	5	3.70	.....	1.32	29	8.5	6	5	11	14	se.	U.S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	43.8	.....	80	22†	4	8	3.31	.....	1.54	30	9.5	8	10	12	8	se.	U.S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	41.4	+3.8	77	23	10	5	1.02	-0.13	0.47	28	1.0	11	13	11	6	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	45.5	+5.3	81	23	12	8	1.56	-0.04	0.47	30	3.0	5	12	8	10	se.	W. L. Goodison.
Lisbon	Ransom	1,091	38	46.4	+4.3	84	14†	11	8	1.88	+0.07	1.15	28	5.0	4	16	7	7	se.	J. O. Halverson.
Mayville	Trall	975	46	47.0	+4.5	83	23	6	8	1.81	+0.24	0.73	27	3.0	5	18	4	8	sw.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	41.8	+1.2	80	22	6	8	1.48	+0.12	0.38	27	11.2	9	10	11	9	se.	C. E. Blasky.
McLeod	Ransom	1,075	31	44.4	+0.8	85	24	10	7	2.99	+1.06	1.61	27	2.4	5	19	5	6	sw.	J. G. Carlson.
McVille	Nelson	1,467	12	.....	.....	.....	.....	.....	.....	2.26	.....	0.76	.....	.....	4	4	14	12	nw.	M. Kabeary.
Milnor	Sargent	1,117	3	46.9	.....	85	24	15	8	3.63	.....	1.15	30	4.5	6	14	13	3	se.	E. W. Wilson.
Oakes	Dickey	1,318	13	45.2	+2.4	84	14	16	7	1.79	-0.05	1.44	28	2.0	4	15	3	12	nw.	F. H. Murray.
Park River	Walsh	998	38	44.2	+3.7	79	22†	16	5	0.50	-0.78	0.32	28	1.0	3	12	11	7	se.	E. J. Taintor.
Pembina Airport	Pembina	803	68	43.3	+4.8	79	23	16	5	0.65	-0.55	0.25	27	1.8	7	6	15	9	s.	U.S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12	.....	.....	.....	.....	.....	.....	1.75	+0.35	0.70	30	1.7	6	12	10	8	ne.	T. M. Rykken.
Sharon	Steele	1,516	18	43.9	+4.3	77	22†	5	8	2.31	+0.81	0.57	6	9.1	9	6	12	12	se.	Nels O. Grefshelm.
Valley City	Barnes	1,245	36	45.0	+5.6	83	14	5	8	1.89	+0.35	0.51	27†	9.0	7	16	5	9	se.	I. C. Robertson.
Wahpeton	Richland	962	50	50.2	+6.0	84	21	10	8	2.62	+0.69	1.29	28	5.5	7	17	6	7	se.	W. J. Cavanaugh.
Average for Eastern Division				45.3	+4.0	86	14	6	8	2.12	+0.35	1.79	27	4.6	6	11	10	9	se.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	45.0	+2.6	87	14	16	7†	2.11	+0.45	0.84	27	0.3	5	9	9	12	se.	U.S. Airway Comm. Sta.
Beulah	Mercer	1,797	28	.....	.....	.....	.....	.....	.....	1.30	+0.40	0.51	25	6.0	7	4	24	2	ne.	R. T. Hamilton.
Bisbee	Towner	1,601	39	44.2	+3.5	81	22†	14	6	0.77	-0.37	0.39	19	2.0	5	15	10	5	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,650	68	46.2	+6.9	87	14	10	8	2.58	+1.06	0.75	25	9.0	9	8	12	10	se.	U.S. Weather Bureau.
Bottineau	Bottineau	1,638	50	41.4	+2.4	80	22	14	7	1.03	+0.26	0.39	26	0.5	7	14	4	12	se.	N. D. School of Forestry
Carrington	Foster	1,579	44	42.1	+2.5	83	22	0	8	1.75	+0.50	0.53	26	8.0	6	9	8	13	se.	Soo Line Agent.
Carson	Grant	2,500	30	46.5	+4.0	89	14	4	7	2.35	+1.11	0.48	18†	3.0	8	14	7	9	se.	J. W. Evans.
Center	Oliver	.....	4	45.6	.....	88	22	5	8	2.60	.....	0.45	18	8.2	12	5	16	9	se.	Fred L. Hein.
Dogden Butte II	McLean	1,880	16	45.0	+3.7	83	22	13	5†	1.79	+0.53	0.47	18	6.8	9	14	5	11	nw.	R. L. Williams.
Drake	McHenry	1,634	13	43.2	+2.8	89	14	11	8	1.01	-0.07	0.39	26	3.5	9	13	6	11	se.	H. G. Kringen.
Dunseith	Roulette	1,682	46	41.9	+2.4	80	22	10	5	1.15	+0.33	0.45	26-27	0.3	8	10	11	9	se.	Geo. Gehres.
Eckman	Bottineau	1,500	37	43.3	+2.9	83	22	15	7	1.19	+0.33	0.40	19	T.	6	12	6	12	se.	R. F. Nowak.
Energy II	McLean	1,750	27	46.8	+3.0	86	22	10	8	2.27	+1.31	0.60	18	6.0	7	13	9	8	s.	H. S. Solenberger.
Fessenden	Wells	1,610	30	45.1	+4.7	84	22	2	8	2.58	+1.33	0.77	5	6.5	7	14	9	7	w.	John V. Zuber.
Fort Yates	Sioux	1,670	42	50.4	+5.6	89	14	18	7	2.40	+1.12	1.00	30	1.0	5	14	6	10	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	44.2	+3.4	84	22	14	7	1.35	+0.07	0.46	18	T.	7	11	7	12	se.	E. C. Bierbaum.
Gackle	Logan	1,951	12	47.2	.....	83	14	13	8	3.31	+1.83	1.56	29	3.5	8	14	9	7	n.	A. H. Haut.
Garrison	McLean	1,925	65	44.2	+2.1	85	22	11	8	2.56	+1.47	0.98	25	5.5	7	9	12	9	se.	E. L. Vorachek.
Granville	McHenry	1,504	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. A. Stubbins.
Hansboro	Towner	1,597	34	40.8	+2.2	81	22	13	5	0.73	-0.53	0.25	28	1.0	7	11	12	7	nw.	W. E. Disher.
Leeds	Benson	1,515	2	42.8	.....	81	22	14	6†	0.70	.....	0.20	6	2.4	6	12	9	9	n.	Carl T. Carlson.
Linton	Emmons	1,711	25	50.4	+7.6	88	14	17	7	1.64	+0.39	0.73	25	1.0	7	14	6	10	se.	Wm. Heyerman.
Maddock	Benson	1,604	27	44.2	+3.6	83	22	12	8	0.86	-0.27	0.24	25	1.7	8	10	10	10	se.	A. T. Felland.
Mandan	Morton	1,750	28	46.3	+3.7	87	22	10	8	2.61	+1.44	0.69	6	7.1	10	12	5	13	se.	No. Gt. Plains Field. Sta.
Manfred	Wells	1,605	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. B. Anderson.
Max	McLean	2,093	13	42.2	+1.6	84	22	2	1	1.98	+0.94	0.92	17	3.0	6	6	5	19	se.	A. W. Rice.
McClusky	Sheridan	1,943	24	44.7	+3.6	85	22	8	1	1.75	+0.55	0.66	6	9.2	8					

Climatological Data for April 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Alpha	Golden Valley	15	15	46.6	+5.2	90	14	4	7	2.44	+1.27	0.49	23	5.0	10	18	4	8	se.	H. A. Bury.
Amidon	Slope	2,908	19	46.6	+5.2	90	14	4	7	3.35	+2.15	1.20	25	6.0	10	15	8	7	nw.	Stanley W. Bale.
Beach	Golden Valley	2,759	36	47.6	+5.4	85	22	10	7	1.89	+0.74	0.59	25	1.5	11	3	14	13	nw.	J. C. Russell.
Berthold Agency	McLean	2,082	48	47.4	+4.4	88	22	15	7	1.20	+0.19	0.29	26	3.5	9	13	8	9	nw.	H. W. Case.
Bowbells	Burke	1,958	13	41.5	+3.2	82	22	12	7	1.45	+0.28	0.42	19	0.0	7	8	8	14	e.	Charles Kaufman.
Bowman	Bowman	2,872	27	43.6	+1.1	84	22	2	7	3.13	+2.01	0.72	26	5.0	7	11	3	16	se.	Oscar L. Erickson.
Crosby	Divide	1,954	33	42.9	+3.0	86	22	10	5	1.21	+0.23	0.54	26	0.0	6	10	8	12	nw.	J. H. Phelps.
Dickinson	Stark	2,543	49	43.1	+1.3	88	22	0	7	2.35	+1.27	0.61	26	5.0	7	5	10	15	se.	Leroy Moomaw.
Dickinson Airport	Stark	2,583	2	44.4		87	22	1	7	2.12		0.65	25	2.6	10	6	15	9	se.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	43.6	+2.1	88	22	8	7	2.04	+0.78	0.54	26	3.0	7	12	6	12	se.	O. T. Evenson.
Epping	Williams	2,224	31	46.3	+4.6	88	22	11	7	1.48	+0.45	0.48	29	0.0	6	17	5	8	se.	T. Beachler.
Fairfield	Billings	5	5							2.42	+1.20	0.85	25	0.8	10	12	8	10	se.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	44.4		85	14	8	7	2.95	+1.78	0.84	25	3.1	10	7	7	16	nw.	Verne King.
Golva	Golden Valley	2,780	2	44.4		85	22	8	7	1.80		0.55	24-25	0.5	9	6	9	15	se.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	2							1.94		0.63	25	4.0	9	10	9	11	se.	Thom. C. Lorenzen.
Hettinger	Adams	2,675	34	48.0	+5.1	87	22	7	7	2.89	+1.92	1.09	25	2.0	9	14	8	8	nw.	C. J. Austad.
Howard	Williams	2,275	34	44.2	+4.9	88	22	5	7	1.05	-0.07	0.49	25	T.	5	7	11	12	nw.	C. P. Amsbaugh.
Kenmare	Ward	1,799	10	43.0		81	22	14	7	0.83	-0.12	0.25	19	0.0	6	10	9	11	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	48.7	+5.5	86	22	5	7	2.35	+1.33	0.67	25	2.5	12	11	7	12	nw.	S. P. Grane.
Mary	McKenzie	13	13							1.86		0.47	25	T.	8	9	8	13	nw.	Fred Hartman.
Medora	Billings	2,271	26							2.05	+1.02	0.50	25	2.5	11	14	7	9	nw.	Vernon Thompson.
Mott	Hettinger	2,424	34	46.6	+4.3	87	22	5	7	1.95	+0.74	0.50	25	2.0	8	11	7	12	se.	P. G. Wick.
New England	Hettinger	2,400	47	45.2	+2.8	86	22	4	7	4.17	+3.16	1.30	6	9.0	9	13	6	11	se.	F. S. Sleight.
Parshall	Mountrail	1,929	26	42.4		85	22	4	7	1.55	+0.60	0.82	26	0.1	7	3	22	5	se.	C. E. Shubert.
Portal	Burke	1,954	36	42.6	+2.0	85	22	12	7	2.01	+1.04	0.50	26	0.0	9	6	9	15	nw.	R. G. Wegener.
Powers Lake	Burke	2,205	36	41.7	+1.7	81	22	14	7	1.87	+0.66	0.41	18	0.0	6	11	11	8	e.	Geo. B. Gee.
Richardton	Stark	2,467	25	46.0	+4.6	86	22	8	7	1.50	+0.36	0.62	25	2.8	8	11	10	9	w.	Assumption Abbey.
Sanish	Mountrail	1,835	16	43.0	+1.3	83	14	14	7	2.18	+1.08	0.63	19	T.	9	10	6	14	se.	H. J. Bugge.
Stauley	Mountrail	2,258	4	43.0		83	22	11	7	1.75		0.42	18	0.0	8	12	7	11	nw.	Leroy Edwards.
Tioga	Williams	2,279	13							1.61	+0.65	0.35	26	T.	7	8	9	13	se.	B. V. Olson.
Trotters	Golden Valley	16	16							2.43	+1.40	0.84	26	T.	7	4	17	9	sw.	Walter Grunewald
Van Hook	Mountrail	1,864	2	46.0		86	14	12	7	1.19		0.50	26	T.	7	13	8	9	se.	Soil Conservation Serv.
Watford City	McKenzie	2,084	28	46.7	+5.3	87	22	13	7	2.11	+0.95	1.07	25	0.0	6	9	13	8	sw.	J. C. Zeller.
Wildrose	Williams	2,258	14							1.72	+0.76	0.40	26	T.	10	12	5	13	se.	L. Holter.
Williston	Williams	1,878	62	46.6	+4.6	87	22	16	7	1.34	+0.14	0.48	24-25	T.	7	12	7	11	se.	U. S. Weather Bureau.
Average for Western Division				44.8	+3.3	90	14	4	7	2.01	+0.77	1.30	5	1.8	8	10	9	11	se.	
Average for the State				44.9	+3.4	90	14	6	8	1.96	+0.51	1.79	27	3.3	7	11	9	10	se.	

Daily Temperatures for April 1942

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley ³	Maximum...	59	49	65	48	26	34	34	42	42	37	37	69	67	87	69	56	63	61	64	70	73	82	74	78	59	66	48	66	59	48	.....	57.7
	Minimum...	28	29	31	22	19	22	16	16	24	20	16	30	39	41	38	26	25	42	37	38	36	45	49	43	44	37	31	32	42	43	.....	32.2
Beach	Maximum...	65	58	62	63	32	35	35	50	47	45	53	75	74	82	77	62	74	70	52	71	79	85	77	46	50	50	57	57	46	47	.....	59.2
	Minimum...	37	33	35	30	25	21	10	24	29	20	19	33	33	65	42	29	35	46	45	45	41	69	43	39	44	39	39	30	41	40	.....	36.0
Bismarck ¹	Maximum...	64	49	65	48	29	34	29	42	39	37	39	71	69	87	69	59	67	59	61	73	76	87	66	62	61	64	52	62	59	48	.....	57.6
	Minimum...	27	31	34	22	20	23	11	10	25	21	24	29	37	47	48	35	31	44	46	42	42	49	50	46	47	42	38	33	42	44	.....	34.7
Bottineau§	Maximum...	52	41	52	35	32	32	29	35	37	37	37	58	63	69	65	49	52	51	52	61	74	80	68	54	63	53	57	50	53	50	.....	51.4
	Minimum...	15	25	29	31	15	17	14	15	20	21	22	25	31	40	37	34	28	28	37	43	44	46	50	43	44	47	36	34	35	41	.....	31.6
Carson	Maximum...	65	48	64	60	27	33	35	47	43	43	47	75	70	89	69	64	69	58	60	71	75	87	69	59	58	61	52	66	60	50	.....	59.1
	Minimum...	28	30	32	25	21	20	4	17	29	18	23	30	35	50	47	31	48	41	43	42	43	41	45	42	46	40	36	30	40	40	.....	33.9
Crosby	Maximum...	59	56	58	32	35	31	39	47	35	47	49	73	71	78	75	55	65	53	53	72	81	86	51	52	56	51	49	47	51	54	.....	55.4
	Minimum...	31	26	25	30	10	23	12	10	23	17	20	29	29	30	34	27	30	33	43	40	40	45	44	35	35	44	38	35	35	35	.....	30.4
Devils Lake ¹	Maximum...	46	41	55	42	28	31	28	32	37	34	35	56	59	75	63	47	51	53	51	67	73	81	74	56	61	64	55	54	52	48	.....	51.6
	Minimum...	26	23	34	19	17	22	19	15	25	22	21	32	36	42	38	31	29	37	42	43	44	49	55	45	45	47	40	37	33	43	.....	33.9
Dickinson Airport ³	Maximum...	64	52	63	51	27	33	28	40	39	39	47	73	69	84	66	60	69	54	54	70	76	87	55	48	57	55	53	60	48	49	.....	55.6
	Minimum...	30	32	37	23	21	14	1	17	23	18	26	30	36	46	43	29	34	43	44	44	44	47	42	41	45	38	33	32	40	40	.....	33.1
Dunn Center	Maximum...	67	54	58	63	28	35	34	42	41	42	48	71	75	85	67	69	48	47	55	74	78	88	52	47	60	56	55	58	50	50	.....	56.6
	Minimum...	28	29	30	20	18	18	8	9	16	17	17	26	29	32	42	32	31	43	43	45	39	43	44	41	41	42	34	28	31	39	.....	30.5
Fargo ¹	Maximum...	56	48	67	52	30	35	29	37	45	34	40	61	65	84	70	47	58	64	64	74	77	82	85	82	68	72	67	65	69	66	.....	59.8
	Minimum...	30	32	32	25	20	26	13	6	29	24	28	33	40	42	46	32	27	38	33	46	42	48	57	49	51	48	37	40	44	53	.....	35.7
Fessenden	Maximum...	51	49	61	59	31	35	33	31	39	40	40	57	62	83	82	67	55	44	61	75	77	84	82	63	62	65	58	60	60	56	.....	57.5
	Minimum...	27	24	31	29	17	19	14	2	23	30	18	28	33	41	42	33	28	39	42	43	44	47	43	44	41	46	36	36	37	41	.....	32.7
Fullerton	Maximum...	54	47	65	55	33	34	34	43	45	35	38	63	66	84	72	59	62	63	68	72	74	80	79	80	66	70	63	67	62	55	.....	59.6
	Minimum...	25	31	30	33	21	24	17	15	27	24	20	32	40	43	52	39	29	43	36	36	32	47	56	46	47	41	37	35	43	46	.....	34.7
Garrison ³	Maximum...	62	53	61	42	30	35	35	34	41	38	40	66	65	84	67	57	62	48	59	71	75	85	59	52	60	57	53	57	57	51	.....	55.2
	Minimum...	30	31	33	20	17	16	13	11	26	20	25	28	33	46	45	32	29	43	43	44	40	46	46	43	44	41	36	32	42	41	.....	33.2
Grafton	Maximum...	49	47	57	53	32	31	33	37	41	40	35	52	63	75	74	63	53	59	56	65	72	78	79	79	70	67	67	55	57	54	.....	56.5
	Minimum...	25	28	32	31	18	24	23	21	31	25	26	30	39	40	41	39	27	34	38	45	40	45	53	45	42	49	40	42	36	44	.....	35.1
Grand Forks Airport ³	Maximum...	49	41	60	44	31	32	31	39	40	34	35	59	62	78	63	46	53	61	60	69	73	78	81	67	69	70	64	57	57	52	.....	55.1
	Minimum...	25	28	33	22	16	24	22	19	26	25	26	32	35	39	41	30	26	33	37	45	38	47	55	44	44	47	38	40	36	46	.....	34.0
Jamestown Airport ³	Maximum...	52	48	64	49	26	32	29	32	39	34	35	61	63	82	69	54	56	60	65	72	73	81	79	63	60	68	52	65	58	49	.....	56.0
	Minimum...	25	30	33	22	20	23	3	5	22	18	14	32	39	41	41	35	28	40	35	41	38	46	54	45	46	42	35	36	42	45	.....	32.1
Kenmare§	Maximum...	60	52	58	32	32	34	36	44	39	40	47	75	64	79	67	55	60	53	53	71	77	81	60	48	60	55	53	49	50	51	.....	54.4
	Minimum...	26	24	24	30	16	22	14	14	20	20	20	28	29	30	28	32	30	31	40	45	45	46	45	42	42	43	39	39	36	40	.....	31.6
Langdon	Maximum...	48	46	48	45	29	31	34	33	39	36	33	51	60	64	63	62	49	53	52	63	70	75	77	73	63	62	61	51	52	49	.....	52.4
	Minimum...	20	16	30	22	10	19	16	15	27	19	14	29	30	35	33	34	19	32	39	39	42	43	51	41	40	45	37	36	37	40	.....	30.3
Marmarth	Maximum...	62	56	67	58	38	34	34	56	55	50	58	77	73	85	65	65	77	70	58	70	80	86	71	71	50	54	50	62	57	59	.....	61.6
	Minimum...	35	31	29	35	28	25	5	25	32	26	26	27	31	45	45	30	42	47	47	48	46	50	42	42	45	37	36	31	42	.....	35.8	
Minot ³	Maximum...	59	52	58	43	30	35	35	41	40	39	45	69	71	84	69	64	61	52	53	73	77	84	66	49	60	59	55	54	53	52	.....	56.1
	Minimum...	30	22	35	18	15	20	15	18	26	20	24	29	29	53	34	33	29	42	41	45	44	50	46	42	42	47	37	34	39	42	.....	33.5
Mott	Maximum...	67	50	65	58	35	35	32	51	45	40	50	71	72	85	80	63	70	65	60	71	76	87	78	51	59	56	54	62	57	48	.....	59.8
	Minimum...	26	33	30	34	22	18	5	17	32	20	21	30	31	48	47	30	21	40	42	42	45	47	45	40	45	39	35	32	44	39	.....	33.4
Pembina Airport ³ ...	Maximum...	44	42	52	40	32	39	34	39	40	30	38	56	64	72	56	46	52	56	53	63	72	77	79	60	71	66	62	48	53	51	.....	52.9
	Minimum...	24	27	32	19	16	25	18	20	25	24	24	30	38	39	39	32	28	33	33	44	44	49	50	44	45	47	40	41	34	43	.....	33.7
Sharon	Maximum...	47	43	61	51	28	31	32	30	38	35	35	56	61	76	71	61	50	55	61	70	71	77	77	71	62	67	63	60	55	47	.....	54.8
	Minimum...	25	27	30	26	18	21	20	5	23	17	18	29	40	40	48	36	27	32	36	45	38	49	56	44	43	45	36	36	37	43	.....	23.0
Steele	Maximum...	56	47	64	61	32	35	31	35	37	37	34	65	65	84	80	62	60	58	66	72	74	84	72	68	62	65	55	62	60	54	.....	57.9
	Minimum...	22	26	26	32	15	20	6	1	25	10	10	24	26	45	43	31	25	42	42	39	37	47	54	44	43	44	34	29	42	40	.....	31.4
Valley City	Maximum...	52	52	65	58	42	36	35	32	43	38	40	61	63	83	82	57	53	60	65	74	75	81	83	80	75	75	70	64	63	63	.....	61.0
	Minimum...	24	30	28	35	19	24	19	5	28	22	20	34	40	40	52	40	28	36	35	47	39	49	58	48	45	44	35	38	42	45	.....	35.0
Wahpeton	Maximum...	56	56	66	60	43	38	37	38	50																							

Daily Precipitation for April 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton.....	Red.					.38																				.01	.52	.67	.36	.40			2.34	
Cooperstown ²	Sheyenne					.56																			T	.28	.13	.22	.33	.33	.51		2.36	
Courtenay.....	James				.32	.25			.02																T	.23	.05	.02	.08	.11	.22		1.85	
Devils Lake i.....	Devils Lake					.14	.07	T		.06				.03					T	.06					T	.05	.02	.18		.09	.03		0.63	
Edgeley.....	James					.09	.10			.01		T							T					.02	.43	.04	1.65	T			T		2.34	
Edmore.....	Devils Lake					.10				.11									T	T						.52	.30	.02				1.05		
Ellendale.....	James					.07	.13												T						.44	1.40	.12		.20			2.36		
Fargo ¹	Red.					.53	.03	T																	.09	T	1.79	T	.92	.88		4.24		
Forman.....	Sheyenne					T	.23			T															.07	T	1.35	.10	.19	.20		2.14		
Fullerton.....	James					.14	.13					T													.28		.08	.09		.90		3.20		
Grafton.....	Red.				T	T	.03	.04		T	T									T						T	.30	.99	.04	.95	.05	2.10		
Grand Forks Airport ^{3†}	do					.31														T	T					.26	.82	.60	T	.40		1.77		
Hankinson ²	do					.42																			.15	.05	.30	.10	.60	T	.45	1.72		
Hannah.....	Pembina					.54	.07			T																.40	.02	.15	.02	.47	.02	.04	3.70	
Hillsboro.....	Red.					.25	.36																			.18	.25	.41	.01	.47			1.02	
Jamestown Airport ³	James					.50																				.10		1.15		.27			1.56	
Langdon.....	Pembina					.24	.31			.02																.03		.73	.41	.10	.07		1.88	
Larimore.....	Red.					.24	.24																			.30		1.61		.21	.63		1.81	
Lisbon.....	Sheyenne					.09																					.05		1.44		.10		1.79	
Mayville.....	Red.					.04	T			.07	.02															.01	T	.25	.24	T	.02	0.50		
McHenry.....	James				.03	.15																				.62	.41	.18	.29		.70		0.65	
McLeod.....	Sheyenne					.13	.57			.01																.28	.04	.32	.41	.30	.25		1.75	
Oakes.....	James					.07	.37																			.01	.03	.51	.51	T	.39		2.31	
Park River.....	Red.					.05	.30																			.01	.09	.43	1.29	T	.45		1.89	
Pembina Airport	do				T	T	.04	T		.07	.02															.01	T	.25	.24	T	.02	0.50		
Petersburg.....	do					.15																				.62	.41	.18	.29		.70		0.65	
Sharon.....	do				T	.13	.57			.01																.28	.04	.32	.41	.30	.25		1.75	
Valley City.....	Sheyenne					.07	.37																			.01	.03	.51	.51	T	.39		2.31	
Wahpeton.....	Red.					.05	.30																			.01	.09	.43	1.29	T	.45		1.89	
Middle Division																																		
Ashley ³	Missouri					.04	T	T		T		T								T					T	.36		.84		.14	.73		2.11	
Bisbee.....	Devils Lake					.11	T													.39						.12	.13		.02		.61	T	0.77	
Bismarck [†]	Missouri				T	.47	.03			.06		T	T							.30					.15	.19	.75		.02		.61	T	2.58	
Bottineau ²	Mouse					.02				T											.35	.02				.07		.39		.13	.05		1.03	
Carrington.....	James					.52																				.01	T	.53		.12	.41		1.75	
Carson.....	Heart					.25														.48						.40	.48	.11		.40	.11		2.35	
Center.....	Missouri					.25	.24			.12		T	.30	T						.45	.10					.02	.25	.25	.29	T	.20	.10	2.60	
Dogden Butte.....	Mouse					.18	.40			.02										.47	.09	.12				.09	.12	.38		T	.04		1.79	
Drake ²	do					.35				.03										.13	.01					.05	T	.39		.01	.02	.02	1.01	
Dunselth.....	do				T	.03				T										.22	.25					.07	.02	.45					1.15	
Eckman.....	do					T	T													.25	.40					.05	.35		.03	.11		1.19		
Energy.....	Missouri					.15	.30							.05						.60						.40	.32	.45		T	.11		2.27	
Fessenden.....	James					.77				.15																	.50	.05		.21	.17	.53	2.58	
Fort Yates.....	Missouri					.10				T																T	T	.84	T	.26		.20	1.00	
Foxholm (near).....	Mouse					T	T			T										.46	.42					T	.06	.09	.03		T	.07	1.35	
Gackle.....	James					.23	.20			.08		T															.21		.67	.27	.56	.09	3.31	
Garrison ³	Missouri					.57	T			T										.70	.05					.11	.15	.93			.05		2.56	
Granville.....	Mouse																																	
Hansboro.....	Devils Lake					.04														.04	.24	T				.06	T	.09		.25	.01	T	0.73	
Linton.....	Missouri					.08	.02					T									.10					.03	.73	.04	.27		.47		1.64	
Maddock.....	Sheyenne					.17				.06																.03	.24	.15	T		.04	.07	0.86	
Mandan ²	Missouri					.69				.02				T	.02					.02	.45					.30	.16	.51	.01	T	.43	T	2.61	
Max ²	do					.30														.92	.02	.45				.25	.04	.45		T			1.98	
McClusky.....	do					.20	.66													.13	T					.20	.05	.32			.06	.13	1.75	
Minot ³	Mouse					.02	.04			T										.83	.16					T	.04	.35		.04	.02		1.50	
Mohall.....	do					.03														.31	.45					.01	.07	.13		.09	.20		1.41	
Napoleon ²	Missouri					.35				.10			.05							T						.08		.25	.07		.38		1.70	
New Salem.....	Heart					.11	.17			.05		T								.41	.01					.02	.30	.57	.17		.38	.09	2.28	
Pettibone.....	James					.83				.02																.10	.04	T	.26	T	.37	.43	2.05	
Rolla.....	Devils Lake					.15														.21	T					.05	T	.19		.14			0.73	
Rugby (near).....	Mouse					.04			.01											.07	.12	.33				.01	.12	.33				T	0.59	
Ryder.....	Missouri					.15	T													.30						.05	.14	.33			.15	.10	1.22	
Selfridge.....	do					.05														.25						.05	.05	1.40	T		.31	.10	2.21	
Steele.....	do					.38	.19			.04		T		.04							.32	T				T	.09	.23	.20	T	.18	T	1.95	
Tagus.....	Mouse					.12														.61	.08	.50				.15		.45		.10		T	1.12	
Towner.....	do					.12														.05						T	.02	.43	.01	.12		.74	.22	2.19
Turtle Lake.....	Missouri					.45	.05			.06		.01	.03							.41	.36						.08	.27	.26	T			1.69	
Tuttle.....	Mouse					.06	.25			T										.30							.17	.24	.03	T		.19	.03	3.11
Washburn.....	Missouri					.36	.66			.13										.30							.17	.24	.03	T		.19	.03	1.48
Westhope.....	Mouse					T														.42							.08	.38	.16		T	.38		

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ²Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³Data for 24 hours ending 12:30 a. m. C.S.T. [†]Precipitation measured with recording gage. *Precipitation included in the next following measurement. T. Trace, or precipitation less than 0.01 inch [WBO, Minneapolis, 6-2-42-1100]

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., MAY 1942 No. 5

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

The month was cool and wet. It was the coolest May since 1935 and only six other Mays had a lower average temperature. No readings of 90° or above were reported during the month. This was the first month since September 1941 with the average temperature below normal. The precipitation was considerably above normal in the southeastern part of the state, somewhat above normal in the southwest, and near normal in the northern part. More than twice the normal amount was reported in Richland, Lamoure, and Logan Counties. Snow fell in all sections on or about the 15th. Fair weather prevailed between the 3d and 10th, but more than the usual number of cloudy days occurred for the month. No severe storms were reported. The cool, cloudy weather and frequent precipitation delayed farm work and vegetation was backward. Livestock was in very good condition.

TEMPERATURE

The mean temperature for the state was 50.0°, or 3.6° below the 1892-1942 average for May. The mean temperature for the eastern division was 51.0°; for the middle division, 49.7°; and for the western division, 49.2°. The highest mean temperature was 53.8° at Wahpeton, and the lowest, 46.2° at Hannah, making a range in mean temperature of 7.6°. The absolute range was 68°, from 87° at Milnor on the 24th, to 19° at Dunseith on the 4th. The average daily excess in temperature for the state since January 1, 1942, is 4.4°.

PRECIPITATION

The average precipitation for the state was 3.03 inches, or 0.71 inch more than the 1892-1942 average for May. In the eastern division the average amount was 3.87 inches; in the middle division, 2.94 inches; and in the western division, 2.27 inches. The greatest monthly amount reported was 6.90 inches at Forman; the least was 0.93 inch at Kenmare. The greatest amount recorded in any 24 consecutive hours was 2.90 inches at Casselton on the 25th. The accumulated excess in precipitation for the state since January 1, 1942, is 1.78 inches.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Auroras				2	3									1	3	1											3	2			
Dust storms																															
Fogs	5	1	1	1	1					1	4	6	1		1	6	3	4	2	2	2	3			1	9	13		3	8	9
Lunar halos																															
Solar halos	1			4	4	1	2	3	2	1	3	2	1		1							2	3								
Hail															2						3	1									
Thunderstorms	6									1		1			1						1	10	2		3	9	2	18	11	8	8

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	29.97	30.36	5	29.29	27	13.5	37	n.	13	86	59	57	46
Devils Lake.....	29.98	30.36	5	29.28	27	11.2	30	n.	13	83	56	54	55
Fargo.....	29.95	30.38	5	29.32	27	13.5	41	n.	13	84	58	60	46
Williston.....	29.98	30.34	5	29.39	27	8.2	27	w.	24	82	52	48	56

† And other dates.

COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	46.6	96	13	3.43	1.84	1.33	2.20	3.9	12	6	8	17
1893...	52.2	97	19	1.29	1.14	2.40	1.61	0.2	6	11	8	12
1894...	54.6	98	23	1.40	1.24	1.88	1.51	0.0	5	16	9	6
1895...	54.4	101	15	2.60	2.88	2.57	2.48	0.0	8	10	11	16
1896...	56.9	103	22	5.44	3.70	5.81	4.95	0.0	13	6	14	11
1897...	55.4	97	16	0.85	0.61	0.60	0.67	T.	4	16	10	5
1898...	52.7	92	14	1.95	1.84	2.15	1.98	0.0	5	15	9	13
1899...	50.6	91	16	3.40	4.80	2.27	3.49	0.4	8	9	9	13
1900...	59.2	106	15	0.78	0.70	0.59	0.69	0.0	3	18	8	5
1901...	60.0	99	19	0.35	0.24	0.33	0.31	T.	2	21	4	6
1902...	55.9	94	24	4.31	3.33	3.06	3.57	0.4	10	13	6	12
1903...	54.3	96	11	2.52	3.35	3.50	3.12	T.	4	14	8	9
1904...	54.2	93	20	2.05	1.64	1.10	1.60	T.	6	14	9	8
1905...	50.1	88	10	4.24	2.78	1.72	2.91	4.0	8	12	8	11
1906...	50.8	99	11	4.41	4.74	5.59	4.91	0.4	12	9	8	14
1907...	44.0	84	6	1.52	1.02	1.39	1.31	3.1	6	12	10	9
1908...	50.8	88	9	3.54	2.58	2.57	2.90	0.9	8	13	7	11
1909...	51.0	98	5	4.75	3.92	4.68	4.46	0.1	10	12	9	10
1910...	50.7	94	10	0.86	0.95	1.28	1.03	0.1	6	12	11	8
1911...	55.0	99	6	4.06	2.25	2.39	2.90	T.	8	14	9	8
1912...	54.2	90	16	4.17	4.59	4.42	4.39	0.7	11	10	10	11
1913...	51.2	100	11	1.75	1.63	1.74	1.71	0.2	9	10	10	11
1914...	55.2	95	16	1.83	2.56	1.98	2.12	1.0	8	16	8	7
1915...	51.1	98	15	3.37	3.21	2.81	3.13	0.4	9	10	10	11
1916...	51.0	95	7	2.95	1.70	1.64	2.10	0.3	8	11	11	9
1917...	51.2	98	15	0.21	0.29	0.53	0.34	0.1	2	20	7	4
1918...	51.7	99	6	2.58	2.40	1.83	2.27	0.5	9	10	11	10
1919...	55.5	101	16	4.29	3.14	1.91	3.11	0.4	9	16	8	7
1920...	53.9	89	20	2.40	1.34	1.54	1.76	0.1	7	13	10	8
1921...	53.8	90	21	2.75	2.22	2.36	2.44	T.	9	13	10	8
1922...	56.3	93	24	4.29	2.81	3.08	3.39	0.1	12	10	11	10
1923...	54.1	100	13	2.56	1.57	1.17	1.77	0.2	6	15	10	6
1924...	46.9	84	15	1.05	0.57	0.81	0.81	0.0	5	12	10	9
1925...	53.6	111	10	1.94	1.17	1.22	1.44	T.	4	17	9	5
1926...	58.5	105	10	2.07	2.09	2.45	2.20	0.0	7	13	11	7
1927...	48.0	87	13	5.21	6.06	5.77	5.68	3.2	14	6	8	17
1928...	58.2	107	16	1.02	1.23	1.00	1.08	0.0	5	18	7	6
1929...	49.1	92	8	2.00	2.69	4.28	2.99	0.4	7	16	9	6
1930...	50.8	98	18	3.76	2.40	1.69	2.62	0.7	9	12	8	11
1931...	53.1	100	10	2.17	1.09	0.98	1.41	0.3	6	16	7	8
1932...	55.9	98	25	2.66	2.02	1.76	2.15	2.2	6	13	9	9
1933...	54.8	98	19	2.78	3.18	3.50	3.15	T.	9	9	10	12
1934...	63.6	111	18	0.46	0.32	0.29	0.36	0.0	3	17	10	4
1935...	49.5	89	20	2.11	2.93	2.79	2.61	1.5	12	6	11	14
1936...	61.0	100	20	1.05	0.66	0.70	0.80	T.	4	19	9	3
1937...	56.9	99	19	2.35	1.67	1.27	1.76	T.	7	12	11	8
1938...	52.0	88	18	2.93	2.07	2.66	2.55	0.2	11	8	12	11
1939...	60.1	104	18	1.33	1.60	1.71	1.55	0	8	13	11	7
1940...	54.9	96	17	1.60	2.26	2.06	1.97	0.1	8	14	11	6
1941...	58.3	98	21	2.23	3.12	3.48	2.94	T.	12	10	10	11
1942...	50.0	87	19	3.87	2.94	2.27	3.03	0.5	11	9	9	13
Period	53.6	111	5	2.53	2.22	2.21	2.32	0.5	8	13	9	9

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Climatological Data for May 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	46	53.6	-1.1	85	29	29	5	4.95	+2.08	2.90	25	0	11	13	5	13	ne.	James. H. Erickson.
Cavalier	Pembina	894	32	50.9		80	29	28	14	2.17	-0.23	0.45	16	T.	9	13	4	14	n.	City Light & Power Co.
Colgate	Steele	1,180	9							3.66		0.92	21	0	9	12	3	16	ne.	Wm. L. Haugen.
Cooperstown	Griggs	1,428	45	50.3	-3.5	80	25	26	5	3.83	+1.23	0.70	18	0	11	16	9	6	ne.	Theo. Marquardt.
Courtenay	Stutsman	1,523	12							4.98	+3.24	1.51	16	3.0	10	8	11	12	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	49.0	-3.6	78	24	27	14	3.01	+0.98	0.98	17-18	T.	13	5	3	23	ne.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	50.8	-3.6	82	28	27	4	5.94	+3.31	1.81	1	0	13	4	1	11	ne.	O. A. Thompson.
Edmore	Ramsey	1,524	18	48.6	-4.6	77	24	25	14	2.44	+0.52	0.71	18	0	7	17	7	7	nc.	Mike Davis.
Ellendale	Dickey	1,457	47	51.3	-4.0	83	28	29	3	5.54	+2.77	1.85	30	0	13	7	7	17	ne.	J. E. Demmer.
Fargo	Cass	895	15	52.0	-3.1	85	28	30	5	2.19	-0.70	0.80	29-30	T.	12	8	4	19	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	51.1	-4.6	82	25	29	5	6.90	+3.75	1.38	1	0	11	11	4	16	n.	Helge Dyre.
Fullerton	Dickey	1,439	44	51.5	-3.3	83	28	28	4	5.54	+2.36	1.64	29-30	0	11	11	8	12	ne.	F. O. Albin.
Grafton	Walsh	827	50	51.6	-2.5	81	28	30	3	1.28	-0.89	0.42	30	0	5	8	9	14	ne.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	52.5	-1.7	85	28	29	5	2.58	-0.01	0.56	28	T.	11	11	8	12	nw.	U. S. Weather Bureau.
Grand Forks Airport	Grand Forks	832	2	50.4		82	28	29	5	2.07		0.45	17-18	T.	10	5	8	18	n.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	52.4	-5.6	86	28	29	3	6.24	+3.71	1.36	13	0	13	1	8	22	nw.	Joseph Rindt.
Hannah	Cavalier	1,568	50	46.2	-5.4	77	12	22	14	3.75	+1.63	1.15	16	3.5	9	6	14	11	ne.	A. E. Prior.
Hillsboro	Traill	901	42	52.6	-2.2	82	28	30	3	2.86	-0.23	0.64	1	T.	11	8	9	14	ne.	Alfred Jahnke.
Jamestown	Stutsman	1,457	50	51.5	-2.6	83	28	27	4	4.05	+1.05	2.32	16-17	0	14	6	12	13	ne.	S. G. Calvelage.
Jamestown Airport	Stutsman	1,494	2	49.8		82	28	26	4	4.57		1.63	16-17	T.	11	4	7	20	e.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	49.4		80	28	22	4	5.06		1.16	30-1	T.	14	5	15	11	ne.	U. S. Wildlife R. fuge.
Langdon	Cavalier	1,615	46	48.4	-3.4	76	28	21	14	2.85	+0.83	0.50	18	3.1	14	12	9	10	ne.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	51.0	-2.4	82	28	28	3	2.29	-0.60	0.50	18	T.	9	10	7	14	ne.	W. L. Goodison.
Lisbon	Ransom	1,091	38	51.6	-3.2	85	28	26	5	4.78	+1.86	1.36	29-30	0	16	14	2	15	ne.	J. O. Halverson.
Mayville	Traill	975	46	53.3	-2.1	84	28	30	3	2.78	-0.13	1.25	16	0	10	17	6	8	se.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	48.2	-4.5	80	28	23	14	2.55	+0.16	0.70	1	T.	11	8	10	13	ne.	C. E. Blasky.
McLeod	Ransom	1,075	31	54.0	-1.8	84	25	28	5	5.30	+2.03	1.18	1	0	10	15	6	10	sw.	J. G. Carlson.
McVie	Nelson	1,467	12																	M. Kabear.
Milnor	Sargent	1,117	3	53.6		87	23	24	3	4.40		1.10	30	0	8	16	9	6	nw.	E. W. Wilson.
Oakes	Dickey	1,318	13	49.7	-5.9	82	25	26	4	4.73	+2.43	1.41	29-30	0	12	12	3	16	nw.	F. H. Murray.
Park River	Walsh	998	38	51.4	-2.2	79	24	23	3	14.2	-0.64	0.48	1	0	5	15	3	13	se.	E. J. Taintor.
Pembina Airport	Pembina	803	68	49.6	-3.6	79	24	27	3	2.76	+0.40	0.57	1	T.	10	7	15	9	n.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12							2.86	+0.60	0.70	27	0	9	11	5	15	ne.	T. M. Rykken.
Sharou	Steele	1,516	18	50.0	-4.1	82	25	26	5	4.38	+1.51	1.00	27	T.	10	5	13	13	ne.	Nels O. Grefsheim.
Valley City	Barnes	1,245	36	51.9	-2.7	82	28	26	5	3.85	+1.05	0.80	1	0	13	13	4	14	ne.	I. C. Robertson.
Wahpeton	Richland	962	50	53.8	-2.5	82	28	28	5	5.72	+3.06	1.44	13	0	14	11	4	16	ne.	W. J. Cavanaugh.
Average for Eastern Division				51.0	-3.4	87	24	21	14	3.87	+1.34	2.90	25	0.3	11	10	7	14	ne.	
Middle Division																				
Ashley	McIntosh	2,014	46	48.4	-5.8	80	28	23	14	4.68	+2.14	1.18	27	T.	11	4	9	18	ne.	U. S. Airway Comm. Sta.
Beulah	Merced	1,797	28							4.47	+2.12	0.68	14	T.	18	0	20	11	ne.	R. T. Hamilton.
Bisbee	Towner	1,601	39	50.5	-2.2	80	24	22	4	2.47	+0.37	0.65	16	0	11	15	7	9	se.	Robert L. Peterson.
Bismarck	Burleigh	1,650	68	50.6	-2.4	84	28	27	14	3.04	+0.72	1.15	17	3.3	15	7	9	15	ne.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	49.9	-2.4	80	25	24	4	1.50	-0.57	0.49	27	0	8	16	6	9	se.	N. D. School of Forestry
Carrington	Foster	1,579	44	47.9	-5.2	81	28	21	14	3.95	+1.38	1.03	17-18	0	12	9	11	11	ne.	Soo Line Agent.
Carson	Grant	2,500	30	49.0	-5.5	82	24	25	3	4.40	+1.95	1.06	17	6.0	11	6	15	10	s.	J. W. Evans.
Center	Oliver		4	50.0		80	28	24	4	4.15		1.15	1	T.	13	2	18	11	ne.	Fred L. Heinz.
Dogden Butte II	McLean	1,850	16	50.2	-4.6	79	24	21	4	2.97	+0.50	1.08	1	2.0	14	8	8	15	se.	R. L. Williams.
Drake	McHenry	1,634	13	48.9	-5.8	78	24	25	14	3.69	+1.89	0.83	17-18	0.5	11	10	7	14	ne.	H. G. Kringen.
Dunseith	Rolette	1,682	46	48.6	-4.2	78	24	19	4	2.08	+0.24	0.94	27	T.	10	3	19	9	ne.	Geo. Gehres.
Eckman	Bottineau	1,500	37	49.8	-2.8	83	24	23	4	1.06	-0.86	0.23	1	0	10	3	18	10	se.	R. F. Nowak.
Energy II	McLean	1,750	27	50.8	-5.5	81	24	25	4	2.32	+0.16	0.70	1	0	7	8	14	9	n.	H. S. Solenberger.
Fessenden	Wells	1,610	30	49.6	-3.3	79	24	22	4	4.43	+2.12	0.73	1	0	12	11	10	10	s.	John V. Zuber.
Fort Yates	Sioux	1,670	42	52.2	-4.5	84	28	27	14	3.68	+1.38	1.02	1	0	10	15	7	9	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	49.6	-4.6	80	24	25	4	1.51	-0.48	0.58	27	0	9	7	11	13	se.	E. C. Bierbaum.
Gackle	Logan	1,951	12	50.8		83	28	26	14	6.04	+3.56	1.64	16	3.0	13	13	5	13	n.	A. H. Haut.
Garrison	McLean	1,925	65	49.2	-4.4	80	24	25	4	2.34	+0.01	0.59	17-18	3.0	11	6	12	13	ne.	E. L. Vorachek.
Granville	McHenry	1,504	35																	C. A. Stubbins.
Hansboro	Towner	1,597	34	48.8	-2.7	81	24	23	4	0.99	-1.10	0.47	1	T.	10	14	7	10	ne.	W. E. Disher.
Leeds	Benson	1,515	2	50.2		79	24	22	4	2.88		1.19	18	2.5	9	14	7	10	n.	Carl T. Carlson.
Linton	Emmons	1,711	25	52.1	-3.6	85	28	25	14	4.75	+2.34	1.86	17	0	13	8	7	16	se.	Wm. Heyerman.
Maddock	Benson	1,604	27	49.4	-4.4	79	24	23	4	2.48	+0.37	0.63	18	0	13	17	5	9	ne.	A. T. Felland.
Mandan	Morton	1,750	28	50.1	-5.0	82	28	26	4	2.84	+0.40	0.72	18	2.0	15	8	0	23	se.	No. Gt. Plains Field Sta.
Manfred	Wells	1,605	39																	P. B. Anderson.
Max	McLean	2,093	13	48.1	-6.0	80	24	25	4	1.71	-0.41	0.45	16	0.2	10	5	9	17	ne.	A. W. Rice.
McClusky	Sheridan	1,943	24	49.2	-4.8	80	24	25	5	2.96	+0.48	0.65	17	T.	10	9	9	13	ne.	F. W. Perry.
Medina	Stutsman	1,816	2							3.70		0.87	15	2.0	13	11	9	11		

Climatological Data for May 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha	Golden Valley	2,908	15	49.2	-4.3	79	24	25	3	2.81	+0.38	1.02	12	T.	15	13	11	7	ne.	H. A. Bury.
Amidon	Slope	2,759	36	52.0	-1.0	83	24	27	3	2.67	+0.21	0.50	30	T	13	10	8	13	n.	Stanley W. Bale.
Beach	Golden Valley	2,082	48	51.0	-3.6	83	24	24	4	1.24	-1.00	0.34	30	T.	13	1	16	14	nw.	J. C. Russell.
Berthold Agency	McLeau	1,958	13	47.6	-3.8	82	24	25	4	1.55	-0.62	1.20	27	0	6	15	6	10	ne.	H. W. Case.
Bowbells	Burke	2,872	27	48.1	-5.5	82	24	25	3	2.10	-0.19	0.53	13	T.	11	10	1	20	nw.	Charles Kaufman.
Bowman	Bowman	1,954	33	48.2	-4.1	86	24	24	4	2.73	+0.79	1.06	25	0	7	9	8	14	se.	Oscar L. Erickson.
Crosby	Divide	2,543	49	47.6	-5.1	81	24	24	3	2.90	+0.57	0.74	13	0.5	16	2	16	13	se.	J. H. Phelps.
Dickinson	Stark	2,583	2	48.5	.....	80	24	27	3	3.22	.....	0.87	12-13	T	14	7	9	15	s.	Leroy Moomaw.
Dickinson Airport	Stark	2,191	42	48.4	-4.4	82	24	20	3	1.81	-0.58	0.37	12	0	11	3	16	12	se.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,224	31	50.9	-4.1	85	24	25	4	1.94	-0.24	0.66	12	0	8	16	8	7	se.	O. T. Evenson.
Epping	Williams	.....	5	.....	.....	.....	.....	.....	.....	2.30	+0.20	0.65	11	T.	10	12	7	12	ne.	T. Beachler.
Fairfield	Billings	2,790	23	48.6	.....	79	24	23	3	3.44	+1.05	0.86	29-30	0.3	13	4	11	16	ne.	Mrs. Edith Larson.
Fryburg	Billings	2,780	2	48.7	.....	81	24	24	3	2.60	.....	0.92	12	T.	13	3	10	18	w.	Verne King.
Golva	Golden Valley	2,073	2	.....	.....	81	24	24	3	1.93	.....	0.52	11	0	12	5	16	10	e.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,675	34	49.6	-4.9	77	8	26	3	3.54	+1.16	0.83	17	T.	14	9	12	10	ne.	Thom. C. Lorenzen.
Hettinger	Adams	2,275	34	.....	.....	82	24	27	4	0.93	-1.03	0.46	27-28	T.	5	14	7	10	.....	C. J. Austad.
Howard (near)	Williams	1,799	10	49.8	.....	82	24	27	4	3.70	+1.38	1.40	30	T.	14	8	10	13	nw.	C. P. Amsbaugh.
Kenmare	Ward	2,714	32	51.4	-2.2	84	24	25	3	1.83	-0.25	0.31	12	T.	8	13	9	9	nw.	Theo. E. Eckberg.
Marmarth	Slope	.....	13	.....	.....	.....	.....	.....	.....	2.42	+0.18	0.55	12	T.	9	11	11	9	nw.	S. P. Grane.
Mary	McKenzie	2,271	26	50.8	-3.8	81	24	26	14	2.58	+0.18	0.60	11	T.	13	2	12	17	nw.	Fred Hartman.
Medora	Billings	2,424	34	50.2	-3.0	84	24	26	2	3.15	+1.17	0.71	10	T.	10	6	14	11	ne.	Ovide E. Grenier.
Mott	Hettinger	1,929	26	47.6	.....	80	24	23	14	1.23	-0.94	0.25	12	0	13	2	21	8	ne.	P. G. Wick.
New England	Hettinger	2,400	47	50.2	-3.0	84	24	26	2	3.15	+1.17	0.71	10	T.	10	6	14	11	ne.	F. S. Sleight.
Parshall	Mountrail	1,929	26	47.6	.....	80	24	23	14	1.23	-0.94	0.25	12	0	13	2	21	8	ne.	C. E. Shubert.
Portal	Burke	1,954	36	48.2	-3.9	82	24	26	3	1.59	-0.48	0.75	27	0	5	8	14	9	e.	R. G. Wegener.
Powers Lake	Burke	2,205	36	48.7	-4.8	81	24	25	3	2.29	+0.11	0.83	26	0	6	11	13	7	e.	Geo. B. Gee.
Richardton	Stark	2,467	25	49.3	-4.6	80	24	27	3	2.92	+0.34	0.47	11	2.0	11	8	11	12	n.	Assumption Abbey.
Sanish	Mountrail	1,835	16	47.9	-7.3	82	24	25	4	1.80	-0.10	0.40	26	0	12	10	6	15	.....	H. J. Bugge.
Stanley	Mountrail	2,258	4	47.8	.....	80	24	23	4	2.06	.....	0.80	27	T.	8	9	12	10	ne.	Leroy Edwards.
Tioga	Williams	2,279	13	.....	.....	80	24	23	4	2.57	+0.63	1.25	27	0	8	10	8	13	nw.	B. V. Olson.
Trotters	Golden Valley	.....	16	.....	.....	83	24	25	4	2.79	+0.47	0.71	25	T.	11	2	18	11	ne.	Walter Grunewald.
Van Hook	Mountrail	1,864	2	50.4	.....	83	24	25	4	1.43	.....	0.45	25	0	7	11	9	11	ne.	Soil Conservation Serv.
Watford City	McKenzie	2,084	28	50.8	-3.7	85	24	25	3	1.61	-0.36	0.42	11	0	8	14	10	7	ne.	J. C. Zeller.
Willrose	Williams	2,258	14	.....	.....	85	24	25	3	1.56	-0.31	0.62	27	0	8	14	6	11	nw.	L. Holter.
Williston	Williams	1,878	62	51.0	-3.0	85	24	27	3	1.53	-0.53	0.36	24-25	0	10	10	10	11	ne.	U. S. Weather Bureau.
Average for Western Division				49.2	-4.3	85	24	23	3	2.27	+0.01	1.40	30	0.1	10	8	11	12	ne.	.....
Average for the State				50.0	-3.6	87	24	19	4	3.03	+0.71	2.90	25	0.5	11	9	9	13	ne.	.....

Daily Temperatures for May 1942

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum...	46	40	39	49	51	64	66	74	60	65	58	51	52	57	64	48	43	46	57	65	61	64	68	75	74	67	73	80	67	55	63	59.4
	Minimum...	34	31	28	25	27	27	36	40	33	34	38	34	31	23	35	33	35	33	33	36	43	43	39	47	54	48	49	45	48	46	47	37.3
Beach	Maximum...	47	54	53	51	58	67	71	77	68	62	65	60	50	63	58	46	45	52	64	72	66	67	73	83	75	68	67	71	70	47	67	62.5
	Minimum...	39	35	27	34	32	38	51	56	45	45	49	45	36	30	39	31	35	32	32	42	41	40	43	50	54	46	55	56	47	41	44	41.6
Bismarck ¹	Maximum...	47	44	42	53	56	65	72	76	64	69	59	53	53	63	70	44	38	49	61	70	59	65	72	80	72	65	80	84	65	55	68	61.7
	Minimum...	36	33	30	29	30	29	41	41	34	39	48	43	33	27	40	34	32	35	34	37	42	38	44	51	51	50	50	48	49	43	49	39.4
Bottineau	Maximum...	41	39	47	53	60	66	72	59	59	67	68	62	51	63	58	63	54	52	66	67	58	65	71	75	80	69	65	73	64	56	60	61.4
	Minimum...	40	32	30	24	30	30	38	39	30	38	46	48	34	26	38	35	37	40	39	42	46	37	49	49	47	39	40	45	39	39	44	38.4
Carson	Maximum...	45	47	50	50	55	68	70	76	65	60	59	55	51	52	69	43	38	44	54	70	65	65	68	82	74	65	71	80	65	51	69	60.5
	Minimum...	36	31	25	32	28	30	34	42	33	42	47	42	35	25	39	32	31	31	28	36	40	39	39	43	48	46	49	41	47	40	48	37.4
Crosby	Maximum...	51	57	50	55	66	66	72	60	64	68	61	56	54	64	46	55	51	60	65	71	66	71	77	86	57	67	63	70	48	55	68	61.9
	Minimum...	36	28	27	24	24	31	36	37	31	31	38	38	31	30	32	30	36	30	30	41	35	39	49	53	35	35	45	42	35	35	34.6	
Devils Lake ¹	Maximum...	45	37	38	48	59	66	70	60	58	67	67	65	47	62	53	50	47	40	60	65	58	67	72	78	74	66	66	78	60	50	50	59.1
	Minimum...	34	30	30	28	32	37	44	39	30	37	43	45	33	27	34	33	36	34	39	39	45	41	44	50	46	38	54	52	40	44	45	38.8
Dickinson Airport ³	Maximum...	44	52	48	46	56	64	69	76	64	54	57	50	48	60	53	48	39	45	61	70	61	63	69	80	68	61	67	74	59	46	65	58.6
	Minimum...	36	31	27	32	30	34	39	41	34	43	48	43	33	30	34	32	32	33	33	38	40	44	45	50	51	46	48	45	43	39	37	38.4
Dunn Center	Maximum...	49	53	48	56	60	68	72	78	66	61	53	52	56	62	47	52	39	51	65	72	60	68	72	82	71	63	70	75	55	48	66	60.8
	Minimum...	39	30	24	26	25	28	29	37	31	35	47	45	34	25	31	32	33	32	33	39	35	43	48	55	42	43	42	48	39	39	36.0	
Fargo ¹	Maximum...	64	41	37	46	55	67	72	71	63	68	64	65	55	59	63	47	50	48	52	65	59	72	76	79	84	68	72	85	71	57	59	62.4
	Minimum...	41	32	31	33	30	37	42	46	36	39	45	36	40	31	39	39	43	42	41	34	47	38	41	45	60	54	53	50	47	51	48	41.6
Fessenden	Maximum...	49	39	41	52	60	68	73	72	61	69	66	64	58	64	61	52	47	49	62	68	57	68	72	79	79	62	66	79	78	57	61	62.0
	Minimum...	37	31	28	22	28	31	39	43	26	30	44	43	35	23	42	32	32	32	34	38	42	37	38	46	53	42	54	47	43	40	45	37.3
Fullerton	Maximum...	51	43	41	50	54	65	71	74	62	68	62	58	55	61	65	58	45	47	59	66	62	67	72	76	80	66	74	83	75	60	61	62.3
	Minimum...	43	34	30	28	30	34	35	35	35	49	37	41	29	32	39	39	37	38	37	46	43	42	42	60	52	58	47	54	49	49	40	40.7
Garrison	Maximum...	44	48	45	58	59	66	72	74	62	68	59	57	52	64	50	53	40	48	64	72	61	65	71	80	72	63	70	77	62	52	64	60.8
	Minimum...	35	29	28	25	30	31	35	41	31	36	48	43	32	26	33	32	34	35	30	40	41	35	43	50	50	40	51	45	44	40	46	37.4
Grafton	Maximum...	50	43	37	48	62	71	73	72	60	67	70	69	65	59	59	50	53	50	63	66	64	74	75	79	78	68	69	81	80	61	57	63.6
	Minimum...	42	33	30	32	30	36	41	45	31	31	39	38	39	30	39	36	37	39	40	35	43	43	42	45	58	41	48	53	40	47	47	39.7
Grand Forks Airport ³	Maximum...	49	39	37	46	59	68	72	62	59	38	69	68	52	58	66	45	48	47	60	65	63	72	77	78	71	68	71	82	64	54	58	61.3
	Minimum...	38	30	30	32	29	36	42	39	29	32	40	39	38	29	36	39	39	42	39	36	42	38	41	44	53	46	51	55	42	48	39	39.4
Jamestown Airport ³	Maximum...	47	40	41	52	56	68	70	74	60	67	55	58	52	60	67	40	43	44	60	65	53	67	71	76	78	63	69	82	66	54	58	61.4
	Minimum...	37	31	30	26	28	32	38	43	34	36	44	38	34	27	37	35	37	36	38	37	45	39	42	46	54	48	54	51	48	48	46	60.3
Keumare	Maximum...	47	52	53	58	64	70	72	60	60	70	64	59	54	64	42	57	51	57	67	71	62	67	73	82	70	68	78	72	47	50	63	61.7
	Minimum...	41	30	30	27	30	38	41	45	30	34	39	43	32	32	38	30	33	38	37	39	44	37	44	52	59	34	38	48	41	35	38	38.0
Langdon	Maximum...	49	42	37	53	65	70	70	68	58	67	70	69	55	58	55	52	50	49	63	65	65	69	71	75	69	63	62	76	72	55	55	61.2
	Minimum...	38	29	26	25	26	33	37	38	24	32	35	41	33	21	35	31	31	33	35	36	72	36	43	47	50	35	47	48	35	40	43	35.6
Marmarth	Maximum...	48	55	57	49	59	66	72	78	66	60	70	60	57	61	63	45	45	53	65	72	67	66	72	84	74	66	67	75	69	55	65	63.3
	Minimum...	41	36	25	35	31	35	32	40	40	40	50	46	35	27	41	34	34	29	28	37	37	42	48	50	50	51	55	41	48	42	40	39.4
Minot ³	Maximum...	45	44	49	56	64	69	74	64	63	70	66	62	52	55	54	55	48	50	65	75	38	64	74	83	74	67	66	78	57	50	62	62.0
	Minimum...	35	31	29	25	27	30	38	37	27	34	42	41	30	23	37	33	36	37	34	43	38	33	41	53	45	37	53	47	43	38	46	36.9
Mott	Maximum...	46	51	48	49	53	63	74	76	65	62	61	57	48	60	62	43	41	47	61	69	61	65	69	81	70	65	70	78	71	53	68	60.7
	Minimum...	39	34	37	32	30	32	43	55	44	49	45	34	26	41	32	32	33	31	39	40	45	44	49	50	45	52	58	52	40	45	40	40.8
Pembina Airport ³	Maximum...	46	37	37	50	65	70	72	55	60	70	73	72	50	58	54	53	56	43	62	69	68	76	76	79	64	63	72	78	62	56	57	61.4
	Minimum...	34	30	27	31	30	40	42	36	30	38	42	41	35	27	38	34	33	37	40	36	42	42	42	46	44	36	48	47	39	46	42	37.9
Sharon	Maximum...	45	40	35	47	60	68	73	65	59	70	68	62	54	60	66	44	43	43	58	64	58	71	73	75	82	66	68	80	76	56	58	60.9
	Minimum...	40	32	28	30	26	38	37	45	30	35	41	39	38	28	38	33	35	38	38	36	43	42	45	49	56	43	50	49	40	45	45	40.8
Steele	Maximum...	45	40	40	52	55	65	69	75	61	67	62	51	50	60	69	48	36	45	57	67	58	64	69	77	78	65	75	80	73	55	64	60.4
	Minimum...	38	31	28	22	27	26	35	37	31	32	46	36	35	22	38	30	30	32	34	32	40	36	44	69	50	46	46	42	46	43	47	36.5
Valley City	Maximum...	50	47	37	47	55	67	71	75	68	68	66	65	58	59	67	65	45	46	56	66	65	68	70	76	80	73	67	82	72	63	58	63.0
	Minimum...	45	35	31	33	26	34	35	44	34	36	48	37	42	31	36	37	38	41	39	35	45	43	38	42	58	50	54	51	48	49	49	40.8
Wahpeton	Maximum...	68	58	41																													

Daily Precipitation for May 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Casselton	Red.	.44												.12			.05	.26	.10	.05			.26				2.90								
Cooperstown ²	Sheyenne	.57			.02									T.			.67	.15	.70	.12		.46			T.		T.			.10	.59	.08	T.	4.95	
Courtenay	James	.75											T.	T.			1.51	.99	.28	.09		.73				.23	T.		.50	.08	.48	T.	3.83		
Devils Lake ^{1†}	Devils Lake	.50	.02	T.									.04	T.		.15	.15	.55	.49	.02	T.	.07							.28		.01	.06	.01	3.01	
Edgeley	James	1.81										.02	.04	.16			.48	1.58	.06			.38				T.	T.		.33	.02	.56	.46	.04	5.94	
Edmore	Devils Lake	.62															.32		.71	.06		.18						T.	.25		.30		2.44		
Ellendale	James	1.28	.01									.07	.08	.23			.24	1.37	.01			.04					T.	T.		.10	.25	1.85	.01	5.51	
Fargo ¹	Red.	.66	.05	T.	T.							T.	.01	.21			.03	.25	.03	.03		.04				T.	T.		.04	.08	.72	.08	T.	2.19	
Forman	Sheyenne	1.38							T.		.04	.10	1.04				.40	.98	T.			.75				.47			.98		.13	.63		6.90	
Fullerton	James	1.04	T.	T.							.06	T.	.17				.36	1.48	T.	.02	.13					T.	T.		.37		.25	1.64	.02	5.54	
Grafton	Red.	.07												T.				T.	.37	.27										.15		.42		1.28	
Grand Forks Airport ^{3†}	do	.28	.06	T.									T.	T.			.25	.37	.15	.03		T.				.03			.43		.16	.31		2.07	
Hankinson ²	do	1.24	1.15	T.							.04	T.	1.36	.23			.02	.92	T.	.01		.02	.34			T.	.02				.04	.85		6.21	
Haunah	Pembina	.70	.10	T.									.30	.10		.60	1.15		.60	.05						.15		T.			T.		3.71		
Hillsboro	Red.	.64	.21	T.			T.						T.	.08			.56	.38	.18	.08		.02							.36		.25	.10		2.86	
Jamestown Airport ³	James	.60									.06	T.					1.57	.62	.04	T.		.11				.16			1.12	.07	.15	.07	T.	4.57	
Langdon	Pembina	.40	.06		.01	.01						.06	T.		.01		.42	.48		.50	.10					.37			.01	.34		.13	.01	2.85	
Larimore	Red.	.42	T.													.42	.32	.09	.50	.15										.17	.19	.43	.02	2.29	
Lisbon	Sheyenne	.75	.13	T.						T.		.02	.11	.12	.13		.12	.76	.12	.04	T.	.20	.28				.13			.61	.62	1.34	T.	4.78	
Mayville	Red.	.47	.08														1.25	.30	.08		.12	.08								.61	.20	.10	.10	2.78	
McHenry	James	.70	.02														.18	.46	.38	.08		.06								.08	.16	.32	.11	2.55	
McLeod	Sheyenne	1.18	.11										.24	.64			.19			.18		.52				1.05			.14		1.05	T.	5.30		
Oakes	James	1.19									.01	.04	.23				.26	.94	.12			.32	.04						.15		.41		.02	4.73	
Park River	Red.	.48	T.	T.												T.				.34	.16						T.		.26			.18		1.42	
Pembina Airport	do	.57	.01	T.	T								T.			.11	.19	.18	.33	.02	T.					.45			.53			.37		2.76	
Petersburg	do	.26															.02	.12	.44	.12		.46								.70	.07	.67		2.86	
Snaron	do	.67	T.	T.										.01			.57	.40	.35	.12		.80					T.		T.	1.00	.18	.28		4.38	
Valley City	Sheyenne	.80											T.	.03			.43	.75	.18	.12		.72				.01	.05	T.	T.	.43	.16	.26	.01	3.85	
Wahpeton	Red.	1.11	.04	T.				T.				.11		1.44	.07		.07	.55			.02		.05				.65	.12		.58	.15	.76	T	5.72	
Middle Division																																			
Ashley ³	Missouri	.27	T.	T.							.06	T.	.04	T.			.84	.56	T.		.29	T.					T	T	1.18	.02	1.14	.27	.01	4.68	
Bisbee	Devils Lake	.31	.05										.06				.55	.65		.25	.04	.12				T	.10		.31		.03			2.47	
Bismarck ^{1†}	Missouri	.59			T.						.04	.11	.23	.04		.04	.23	1.15	.07		.07	.14				.10		.02	T.	.17	.04	T.	3.50		
Bottineau ²	Mouse	.05	.45						T.					.03			.16					.09						.09		.49			.14	1.04	
Carrington	James	.79	.22	T.													.08	.30	1.03	.27		.54	.03					.03		.49	.15	.02	T.	3.95	
Carson	Heart	.95							.06			T.	.46	.24	.51		.05	.63	1.06	.12		.07				T.		.03			.25		.40	4.40	
Center	Missouri	1.15										.29	.06	.08			.40	.88	.43		.15	.08				T.	.13	T.	T.		.06	.38	.06	4.15	
Dogden Butte	Mouse	1.08	.03										T.	.02	.17		.04	.50	.28	.31	.02	.12	.06			T.		T.	T.	.14		.19	.01	2.97	
Drake ²	do	.53	.41	T.									.05	.19			.50		.69	.14		.44	.01				.20		.48			T.	.10	3.69	
Dunseith	do	.25	.02														.10	.04		.04		.40				T.		.94			.09	.15	.08	2.08	
Eckman	do	.23											.08	.04			.20	.03		.18		.08	.09			T.		.15				.04	.09	1.06	
Energy	Missouri	.70										.28	T.	.16			.30	.45	.18		T.					T.		T.			.25		2.32		
Fessenden	James	.73	.02										.02	T.			.36	.71	.41		.21	.49			.71	.03		.57	T				4.43		
Fort Yates	Missouri	1.02							T.			.17	.54	T.			.59	.75	.14		.19	.13				.09	T.		.13		.17		3.68		
Foxholm (near)	Mouse	.20	.01						T.				T.	.15			.21	.07		.18		.08							.58		.19	.02	1.51		
Gackle	James	1.51	T.					T.	T.			.15	.05		.18		1.64	1.41	.12	.06	T.	.15				T.	T.		.27	.13	.28	.09	T.	6.04	
Garrison ³	Missouri	.17										.15	.25				.24	.17	.52	.07							.37		.02	.13	.25		2.34		
Granville	Mouse																																		
Hansboro	Devils Lake	.47	.01										T.	.07			.07	.02		.08	.01					T.			.10	.10		.12		.099	
Hintou	Missouri	.73							T.			.18	.37	.07			.37	1.86	.04		.30	.07	.01			T.			.01		.34	.07		4.75	
Maddock	Sheyenne	.37	.01										T.	.04		.01	.36	.10	.63	.03		.50							.13	.26		.03	.01	2.48	
Mandan ²	Missouri	.54	.18									.21	.03	.18			.16	.49	.72			.06	T.					.10	.01	.03	.06	.01	.06	2.44	
Max ²	do	.12	.23									.73	.12	.10			.45	.28											.05		.07	.26		1.71	
McClusky	do	.37										T.	.15	T.			.41	.65	.30			.14						.04		.05		.28	.02	2.96	
Minot ³	Mouse	.22	.02										.13			.28		.04	.03			.17	.01						.15		.08	.09		1.27	
Mohall	do	.12														.20					.09	.23							.48			.17	.07	6.28	
Napoleon ²	Missouri	.90	.43								.08	.02	.35				.35	.40	.20		.05		.28					.10		.50	.25	.17		6.28	
New Salem	Heart	.60									.32	.15	.16				.47	.75	.45			.05						.16		.11		.06	.34	.02	2.92
Pettibone	James	.57	.03														.12	.03	.06										1.14		.29			3.70	
Rolla	Devils Lake	.38	.04											T.															.24	.01		.17		1.05	
Rugby (near)	Mouse	.41	.02										.10	.03			.56	.37		.10	T.		.20						.35	T.	.10	.25	T.	2.55	
Ryder	Missouri										.12	.15	T.			.07	.68	T.											.24		.10			1.11	
Selfridge	do	1.22								.30		.45	T.				.54	1.07	.27			.11	.09					T.	T.	T.	.28	.38	T.	3.19	
Steele	do	.94	.09								.13	.15	.05				.36			.27		.01	.07	T.					.27	.08	.25	.03		4.08	
Tagus	Mouse	.15										T.	.25	.18</																					

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹ First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ² Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³ Data for 24 hours ending 12:30 a. m. C.S.T. ⁴ Precipitation measured with recording gage. ⁵ Precipitation included in the next following measurement. T. Trace, or precipitation less than 0.01 inch. [WBO, Minneapolis, 7-3-42-1100]

1.05
VNT
516

nat. Hist.

DEC 6 1945

UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

DEC 8

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LI

BISMARCK, N. D., JUNE 1942

No. 6

GENERAL SUMMARY

June was cool and cloudy. It was unusually cool near the middle of the month and frost occurred at many places in the western part of the state on the 23d. The precipitation averaged slightly below normal but the western division averaged considerably above normal and several counties in the extreme southeastern part of the state were also considerably above normal. The precipitation was well distributed throughout the month and occurred mostly as moderate showers, although some heavy showers were reported between the 3d and 5th and again on the 27th. No severe storms were reported. It was an excellent month for small grains, pastures, and livestock, but it was too cool for corn.

TEMPERATURE

The mean temperature for the state was 60.1°, or 2.9° below the 1892-1942 average for June. The mean temperature for the eastern division was 61.2°; for the middle division, 60.1°; and for the western division, 59.0°. The highest mean temperature was 63.6° at Hankinson, and the lowest, 56.6° at Powers Lake, making a range in mean temperature of 7.0°. The absolute range was 63°, from 90° at Milnor on the 10th, to 27° at Portal on the 13th. The average daily excess in temperature for the state since January 1, 1942, is 3.2°.

PRECIPITATION

The average precipitation for the state was 3.12 inches, or 0.30 inch less than the 1892-1942 average for June. In the eastern division the average amount was 2.81 inches; in the middle division, 2.81 inches; and in the western division, 3.75 inches. The greatest monthly amount reported was 7.59 inches at Fullerton; the least was 1.00 inch at Foxholm. The greatest amount recorded in any 24 consecutive hours was 3.21 inches at Fullerton on the 4-5th. The accumulated excess in precipitation for the state since January 1, 1942, is 1.48 inches.

ERRATA

- APRIL 1942—
p. 14: Bottineau mean temperature should be 41.5°.
p. 15: Daily temperatures; Jamestown Airport, maximum temperature for the 24th should be 73°; Kenmare, minimum temperature for the 15th should be 38°; Valley City, maximum temperature for the 16th should be 67°; Williston, maximum temperature for the 2d should be 57°.
p. 16: Fessenden daily precipitation on the 30th should be .73 inch; Foxholm daily precipitation on the 26th should be .09 inch.
- MAY 1942—
p. 18: Edgely, number of days partly cloudy should be 16; Fessenden, the temperature departure should be -3.7°; Wilton, date of the highest temperature should be the 28th.
p. 19: Dunn Center, lowest temperature should be 24°; Grand Forks Airport, maximum temperature on the 10th should be 68°; Jamestown Airport, maximum temperature on the 11th should be 65°; Kenmare maximum temperature on the 27th should be 68°; Langdon, minimum temperature on the 21st should be 42°.
p. 20: Rugby, precipitation on the 13th, should be .07 inch; Turtle Lake, no precipitation on the 12th; Beach, precipitation on the 18th should be .03 inch.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aurora																															
Dust storms																															
Fogs	5	14	7	3	5	5	3	3	8		3	2					1	2	1		2	1			1	10	16	18	17	2	3
Lunar halos																															
Solar halos																															
Hail	1	1																													
Thunderstorms	9	7	10	10	6	6		1	5	6	14	1			4	3	3	3		5	1	1			3	2	6	33	6	3	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	Percentage of sunshine
Bismarck	29.89	30.29	30	29.49	10	12.9	40	w.	16	86	61	56	60
Devils Lake	29.88	30.24	30	29.46	10	9.4	23	nw.	22	86	61	61	55
Fargo	29.90	30.17	30	29.51	11	12.5	34	w.	21	85	65	66	47
Williston	29.88	30.35	30	29.38	16	9.2	29	w.	10	84	54	51	61

† And other dates.

COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	60.5	94	28	3.59	4.44	2.03	3.35	0	8	11	9	10	
1893...	67.4	103	33	3.25	4.28	2.60	3.38	0	9	13	10	7	
1894...	68.8	103	25	4.08	2.31	3.93	3.44	0	7	17	6	7	
1895...	59.7	97	29	5.37	4.54	4.11	4.67	0	12	8	13	9	
1896...	65.6	97	37	3.06	4.33	4.68	4.02	0	9	16	9	5	
1897...	61.7	109	20	4.40	4.40	2.45	3.75	0	9	11	10	9	
1898...	62.6	105	26	3.17	3.21	3.18	3.19	0	9	10	10	10	
1899...	62.2	105	30	3.20	4.25	3.98	3.81	0	10	12	11	7	
1900...	66.9	109	27	1.59	1.54	1.04	1.39	0	5	15	11	4	
1901...	61.6	95	22	7.20	5.31	5.90	6.14	0	15	10	11	9	
1902...	58.0	97	28	3.67	3.75	3.53	3.65	0	11	12	9	9	
1903...	62.4	96	27	1.02	1.52	1.78	1.44	0	4	17	8	5	
1904...	61.4	100	30	5.95	5.92	4.82	5.56	0	11	13	8	9	
1905...	59.7	97	32	4.49	4.64	3.87	4.33	0	12	10	7	13	
1906...	62.0	95	32	3.80	4.21	6.34	4.78	0	11	13	8	9	
1907...	61.9	95	25	3.47	2.53	2.80	2.93	0	10	12	10	8	
1908...	60.4	93	27	2.91	3.63	3.70	3.41	0	10	12	9	9	
1909...	62.9	98	28	3.94	2.49	3.92	3.45	0	10	12	11	7	
1910...	67.3	111	19	1.26	1.85	3.00	2.04	0	6	16	9	5	
1911...	66.9	108	25	3.13	3.42	2.61	3.05	0	9	13	10	7	
1912...	61.8	104	28	2.27	2.11	1.65	2.01	0	6	16	8	6	
1913...	65.8	101	27	2.85	1.98	2.52	2.45	0	8	16	9	5	
1914...	62.2	93	29	5.67	7.13	6.64	6.48	0	13	9	11	10	
1915...	56.7	94	20	5.59	5.11	3.73	4.81	0	12	9	12	9	
1916...	58.0	92	29	4.06	3.51	4.05	3.87	0	11	10	11	9	
1917...	59.7	103	19	2.38	1.88	1.96	2.07	0	8	13	11	6	
1918...	63.3	102	27	2.23	1.53	0.97	1.58	0	7	14	11	5	
1919...	67.2	108	22	3.15	1.99	1.50	2.21	0	5	15	10	5	
1920...	62.2	98	26	3.64	3.74	3.20	3.53	0	11	12	12	6	
1921...	68.2	108	30	3.28	2.83	4.74	3.62	0	9	14	10	6	
1922...	63.5	108	30	3.38	3.55	4.44	3.79	0	9	15	8	7	
1923...	66.1	100	30	4.79	2.83	4.21	3.94	0	8	13	12	5	
1924...	58.6	89	26	3.45	4.51	4.17	4.04	0	11	10	12	8	
1925...	61.5	98	30	7.72	5.43	4.84	6.00	0	14	11	10	9	
1926...	60.7	104	22	2.66	2.47	2.71	2.61	0	9	13	9	8	
1927...	61.2	99	22	3.81	2.34	2.30	2.82	0	9	11	13	6	
1928...	58.2	92	24	4.83	5.30	4.53	4.89	0	12	10	10	10	
1929...	61.4	98	21	1.10	1.10	2.12	1.44	0	7	16	9	5	
1930...	63.3	96	30	2.31	3.42	3.53	3.09	0	10	13	11	6	
1931...	68.4	110	27	2.93	2.05	2.07	2.35	0	8	14	10	6	
1932...	67.0	98	34	3.33	3.61	4.83	3.92	0	10	14	10	6	
1933...	70.7	110	33	1.99	1.66	1.67	1.77	0	7	18	10	2	
1934...	64.3	100	29	3.74	2.85	2.54	3.04	0	11	12	10	8	
1935...	60.3	99	25	3.65	2.70	2.77	3.04	T.	10	11	12	7	
1936...	66.4	110	28	1.41	1.40	1.20	1.34	0	6	16	10	4	
1937...	63.5	109	25	3.04	5.62	3.43	4.03	T.	7	15	9	6	
1938...	64.2	99	27	1.82	2.87	3.49	2.73	0	9	11	11	8	
1939...	60.1	99	29	5.44	4.67	3.67	4.59	0	12	10	11	9	
1940...	63.1	102	27	2.02	2.10	2.60	2.24	0	9	13	11	6	
1941...	64.2	97	32	5.86	4.91	5.85	5.54	0	12	12	9	9	
1942...	60.1	90	27	2.81	2.81	3.75	3.12	0	11	9	12	9	
Period	63.0	111	19	3.52	3.38	3.37	3.42	T.	9	13	10	7	

Climatological Data for June 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	46	62.7	-1.2	84	10	37	13	2.36	-1.35	0.96	5	0	10	5	14	11	se.	Robert Beard.
Cavalier	Pembina	894	32	61.4	.....	85	3†	38	13	1.22	-1.98	0.55	28	0	6	9	7	14	se.	City Light & Power Co.
Colgate	Steele	1,180	9	.....	.....	.....	.....	.....	.....	1.41	.....	0.46	5	0	7	5	10	15	sw.	Wm. L. Haugen.
Cooperstown	Griggs	1,428	45	60.3	-2.9	80	2†	38	13	4.06	+0.73	1.09	3	0	13	16	9	5	nw.	Theo. Marquardt.
Courtenay	Stutsman	1,523	12	.....	.....	.....	.....	.....	.....	3.46	+0.81	0.72	11	0	13	5	15	10	se.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	60.0	-1.9	81	9	39	13	2.63	-0.93	1.51	27	0	13	4	7	19	se.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	61.6	-2.0	79	3†	34	13	2.62	-1.04	1.05	24-25	0	10	3	21	6	se.	O. A. Thompson.
Edmore	Ramsey	1,524	18	59.0	-3.3	80	3†	36	13	1.91	-1.35	1.10	27	0	7	14	13	3	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	62.2	-2.6	81	10	37	13	6.39	+3.11	2.59	4	0	11	9	8	13	nw.	J. E. Demuier.
Fargo	Cass	895	15	62.6	-1.8	84	10	37	13	2.32	-1.73	1.10	4-5	0	8	4	12	14	se.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	62.4	-2.6	82	10	34	13	4.01	+0.52	1.33	27	0	8	14	6	10	s.	Helge Dyste.
Fullerton	Dickey	1,439	44	62.1	-2.1	81	3†	33	19	7.59	+3.82	3.21	4-5	0	9	7	16	7	nw.	F. O. Alin.
Grafton	Walsh	827	50	62.1	-1.6	84	9	37	13	1.49	-1.91	0.47	19	0	10	4	16	10	se.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	62.4	-1.0	85	10	39	13†	1.44	-1.41	0.72	27	0	9	5	12	13	se.	U. S. Weather Bureau.
Grand Forks Airport	Grand Forks	832	2	61.1	.....	84	10	38	13†	2.06	.....	0.79	27	0	8	6	9	15	se.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	63.6	-3.3	85	9†	38	13	3.39	+0.32	1.10	4-5	0	9	3	16	11	se.	Joseph Rindt.
Hannah	Cavalier	1,568	50	57.5	-3.0	81	9	31	13	3.50	+0.11	1.80	28	0	9	5	13	12	se.	A. E. Prior.
Hillsboro	Trail	901	42	62.5	-2.2	84	10	36	12	1.68	-0.69	0.76	27	0	11	8	10	12	se.	Alfred Jahnke.
Jamestown	Stutsman	1,457	50	62.0	-1.7	81	9†	39	23†	2.78	-0.83	0.71	27	0	10	3	14	13	ne.	S. G. Calvelage.
Jamestown Airport	Stutsman	1,494	2	60.2	.....	79	3†	38	12†	2.92	.....	0.73	24-25	0	11	5	13	12	w.	U. S. Airway Comm. Sta.
Kenai	Stutsman	1,440	3	59.2	.....	80	3	34	23	2.69	.....	0.69	25	0	16	4	15	11	se.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	59.0	-1.6	83	3	31	13	1.64	-1.76	0.75	27	0	10	5	16	9	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	61.1	-1.8	82	10	38	13	1.71	-2.15	0.75	27	0	7	7	6	17	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	62.2	-2.2	85	3	36	13	3.60	-0.24	1.70	4-5	0	10	6	7	17	nw.	J. O. Halverson.
Mayville	Trail	975	46	62.5	-2.0	83	10	38	14	2.02	-1.33	0.80	27	0	5	11	10	9	se.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	58.6	-3.2	80	9†	36	13	4.59	+1.11	2.29	2-3	0	16	3	14	13	se.	C. E. Blasky.
McLeod	Ransom	1,075	31	58.8	-6.5	81	7	36	13	1.25	-2.76	0.36	25	0	6	14	11	5	se.	J. G. Carlson.
McVie	Nelson	1,467	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Kabeary.
Milnor	Sargent	1,117	3	62.4	.....	90	10	36	13	3.75	.....	0.92	24	0	7	21	4	5	nw.	E. W. Wilson.
Oakes	Dickey	1,318	13	61.2	-4.1	82	10	35	13	4.50	+1.40	2.15	4	0	9	6	6	18	se.	F. H. Murray.
Park River	Walsh	998	38	61.4	-1.7	85	9	36	13	1.75	-1.64	0.48	27	0	6	18	1	11	nw.	E. J. Taintor.
Pembina Airport	Pembina	808	68	60.7	-2.1	85	9	36	13	1.15	-2.18	0.54	27-28	0	7	6	11	13	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12	.....	.....	.....	.....	.....	.....	1.75	-1.49	0.79	27	0	10	7	15	8	se.	T. M. Rykken.
Sharon	Steele	1,516	18	60.2	-2.8	84	3	35	13	2.14	-1.62	0.90	27	0	14	2	14	14	se.	Nels O. Greisheim.
Valley City	Barnes	1,245	36	61.9	-2.2	82	10	38	13†	2.46	-1.00	0.60	5	0	12	7	13	10	se.	I. C. Robertson.
Wahpeton	Richland	962	50	63.5	-2.3	83	27	37	13	1.93	-1.78	0.58	16	0	9	7	11	12	se.	W. J. Cavanaugh.
Average for Eastern Division				61.2	-2.5	90	10	31	13	2.81	-0.71	3.21	4-5	0	10	8	11	11	se.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	59.0	-4.2	78	3†	33	23	5.73	+2.49	1.95	6	0	16	7	10	13	w.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	28	.....	.....	.....	.....	.....	.....	5.75	+1.81	2.38	3	0	16	1	27	2	nw.	R. T. Hamilton.
Bisbee	Towner	1,601	39	61.8	-0.3	89	4†	33	23	1.40	-2.09	0.62	27	0	7	9	12	9	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	61.3	-2.4	82	3	36	23	2.08	-1.27	0.42	28	0	13	.....	.....	.....	.....	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	68	61.5	-1.4	84	3	33	23	2.21	-1.14	0.43	27	0	14	9	12	9	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	58.8	-3.0	80	3†	33	13	1.64	-1.68	0.42	10	0	13	12	8	10	se.	N. D. School of Forestry
Carriageton	Foster	1,579	44	58.8	-4.6	80	3	36	13	2.02	-1.50	0.59	28	0	16	9	13	8	sw.	Soo Line Agent.
Carson	Grant	2,500	30	60.3	-3.4	86	14	33	22	3.80	+0.30	1.42	23	0	9	9	16	5	nw.	J. W. Evans.
Center	Oliver	.....	4	60.4	.....	81	10	30	23	2.56	.....	0.68	24	0	14	1	26	3	nw.	Fred L. Heinz.
Dogden Butte II	McLean	1,880	16	59.4	-3.1	80	9	35	13	2.12	-1.41	0.46	27	0	12	11	8	11	se.	R. L. Williams.
Drake	McHenry	1,634	13	59.8	-4.0	81	9	32	23	1.93	-0.96	0.55	2	0	15	11	7	12	w.	H. G. Kringsen.
Dunkin	Boette	1,682	46	57.9	-3.5	79	9†	31	13	1.86	-1.26	0.47	27	0	12	3	18	9	se.	Geo. Gehrs.
Eckman	Bottineau	1,500	37	59.7	-2.3	82	9†	29	13	1.13	-1.87	0.32	28	0	12	5	11	14	nw.	R. F. Novak.
Energy II	McLean	1,750	27	61.0	-3.3	81	9	32	23	4.00	+0.60	1.03	27	0	11	11	15	4	nw.	H. S. Solenberger.
Fessenden	Wells	1,610	30	60.3	-2.3	82	9	34	23	3.77	+0.08	1.38	27	0	11	7	13	10	sw.	John V. Zuber.
Fort Yates	Sioux	1,670	42	62.5	-4.1	82	3†	34	23	4.72	+1.26	1.40	4	0	11	14	12	4	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	59.4	-2.5	81	26	33	13	1.00	-2.10	0.23	29	0	10	8	13	9	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	62.0	.....	81	3	35	23	2.96	-0.49	0.66	11	0	12	15	5	10	nw.	A. H. Haat.
Garrison	McLean	1,925	65	59.3	-3.6	81	9	33	23	3.03	-0.51	0.57	27	0	12	6	15	9	se.	E. L. Vorachek.
Granville	McHenry	1,504	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fred Roble.
Hansboro	Towner	1,597	34	58.2	-2.6	80	2†	34	12†	1.73	-1.65	0.60	28	0	9	9	14	7	se.	W. E. Disher.
Harvey	Wells	1,396	39	.....	.....	.....	.....	.....	.....	2.87	-0.70	1.51	27	0	14	7	17	6	nw.	Orville Hokschi.
Leeds	Benson	1,515	2	60.5	.....	82	3	37	13	1.46	.....	0.86	27	0	8	8	13	9	w.	Carl T. Carlson.
Linton	Emmons	1,711	25	62.4	-2.8	82	2	32	23	3.42	+0.26	1.40	27	0	12	9	10	11	nw.	Wm. Heyerman.
Maddock	Benson	1,604	27	60.4	-1.8	80	3†	35	13	3.51	+0.14	1.15	27	0	13	9	14	7	se.	A. T. Felland.
Mandan	Morton	1,750	28	61.0	-3.4	81	9	34	23	2.42	-0.87	0.48	5	0	15	10	6	14	nw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	13	58.4	-5															

Climatological Data for June 1942																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha	Golden Valley	15	19	58.9	-3.9	81	26	33	23	4.13	+0.73	1.22	4	0	15	22	6	2	se.	H. A. Bury.
Amidon	Slope	2,908	19	58.9	-3.9	81	26	33	23	4.88	+1.52	1.37	5-6	0	16	12	12	6	nw.	Stanley W. Bale.
Beach	Golden Valley	2,759	36	60.8	-1.8	83	26	36	22	2.98	-0.72	0.68	4	0	11	1	23	6	nw.	J. C. Russell.
Berthold Agency H.	McLean	2,082	48	60.8	-2.6	81	26	30	23	4.22	+0.35	1.99	6	0	9	12	11	7	nw.	H. W. Case.
Bowbells	Burke	1,958	13	57.2	-2.6	78	37	28	13	3.63	-0.20	1.30	27	0	12	11	7	12	sw.	Charles Kaufman.
Bowman	Bowman	2,872	27	57.8	-5.6	79	26	32	22	4.05	+1.10	0.75	28	0	16	15	3	12	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	33	57.0	-4.7	83	15	30	13	3.16	-0.20	1.50	16	0	12	6	13	11	w.	J. H. Phelps.
Dickinson	Stark	2,543	49	57.8	-4.3	80	9	33	23	4.84	+1.47	2.10	6	0	14	8	13	9	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,583	2	58.6	.....	78	37	37	137	4.66	.....	2.29	5-6	0	14	3	21	6	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	58.4	-4.1	79	27	33	23	5.24	+1.37	1.58	3	0	15	6	17	7	nw.	O. T. Evenson.
Epping	Williams	2,224	31	59.8	-3.3	82	15	30	127	3.90	+0.33	1.85	16	0	10	13	12	5	nw.	T. Beachler.
Fairfield	Billings	.....	5	.....	.....	.....	.....	.....	.....	6.15	+3.15	1.10	3	0	12	21	3	6	se.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	58.4	.....	79	37	36	12	5.71	+2.41	1.54	6	0	14	7	16	7	nw.	Verne King.
Golva	Golden Valley	2,070	2	57.7	.....	79	26	31	23	2.59	.....	0.78	4	0	13	8	15	7	w.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,783	2	.....	.....	.....	.....	.....	.....	6.45	.....	2.44	3	0	11	7	18	5	e.	Thom. C. Lorenzen.
Hettinger	Adams	2,675	34	60.6	-3.4	80	2	34	14	3.71	+0.51	1.37	26-27	0	10	13	11	6	nw.	C. J. Austad.
Howard H. (near)	Williams	2,275	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. P. Amsbaugh.
Kenmare	Ward	1,799	10	59.5	.....	81	3	33	13	1.37	-1.69	0.66	27-28	0	9	11	7	12	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	60.6	-2.8	82	26	35	227	4.02	+0.96	0.97	4	0	13	13	10	7	nw.	S. P. Grane.
Mary	McKenzie	.....	13	.....	.....	.....	.....	.....	.....	3.95	+1.01	1.20	6	0	12	18	8	4	nw.	Fred Hartman.
Medora	Billings	2,271	26	.....	.....	.....	.....	.....	.....	3.82	+0.45	1.15	26-27	0	10	11	15	4	nw.	Ovide E. Grenier.
Mott	Hettinger	2,424	34	61.2	-3.8	82	26	33	22	3.89	+0.67	0.92	67	0	13	12	13	5	nw.	P. G. Wick.
New England	Hettinger	2,400	47	61.6	-2.0	82	3	24	23	5.04	+2.08	1.55	6-7	0	12	9	13	8	nw.	F. S. Sleight.
Parshall	Mountrail	1,929	26	57.6	.....	79	37	29	23	2.24	-1.32	0.68	10	0	14	1	26	3	se.	C. E. Shubert.
Portal	Burke	1,954	36	58.0	-2.6	85	15	27	13	2.24	-1.05	0.55	16	0	10	5	17	8	nw.	R. G. Wegener.
Powers Lake	Burke	2,205	36	56.6	-4.9	79	4	29	22	2.35	-1.25	0.71	27	0	7	13	13	4	w.	Geo. B. Gee.
Richardton	Stark	2,467	25	59.2	-3.9	78	9	36	127	4.11	+0.70	1.12	6	0	12	10	15	5	se.	Assumption Abbey.
Sanish	Mountrail	1,835	16	57.8	-5.5	76	4	31	23	3.19	-0.19	0.81	10	0	13	8	11	11	.....	H. J. Bugge.
Stanley	Mountrail	2,258	4	57.2	.....	79	9	30	13	1.50	.....	0.38	27	0	7	6	17	7	w.	Leroy Edwards.
Tioga	Williams	2,279	13	.....	.....	.....	.....	.....	.....	2.01	-0.79	0.88	15-16	0	7	10	11	9	se.	B. V. Olson.
Trotters	Golden Valley	.....	16	.....	.....	.....	.....	.....	.....	3.75	+0.27	0.98	5-6	0	12	2	23	5	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	2	60.2	.....	81	3	29	23	3.29	.....	0.96	10	0	11	14	11	5	w.	Soil Conservation Serv.
Watford City	McKenzie	2,084	28	59.9	-3.2	81	37	32	137	3.10	-0.10	0.80	27	0	9	8	18	4	w.	J. C. Zeller.
Wildrose	Williams	2,258	14	.....	.....	.....	.....	.....	.....	3.23	+0.32	1.93	16	0	12	12	9	9	nw.	L. Holter.
Williston	Williams	1,878	62	60.1	-2.6	81	26	35	13	5.56	+2.13	2.83	15-16	0	13	12	11	7	w.	U. S. Weather Bureau.
Average for Western Division				59.0	-3.6	85	16	27	13	3.75	+0.38	2.83	15-16	0	12	9	14	7	nw.	.....
Average for the State				60.1	-2.9	90	10	27	13	3.12	-0.30	3.21	4-5	0	11	9	12	9	nw.	.....

Daily Temperatures for June 1942																																			
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley ³	Maximum...	64	75	78	74	68	70	71	70	75	78	72	52	60	72	70	71	72	72	71	69	61	63	66	55	66	74	74	69	73	76	....	69.	
	Minimum...	50	54	58	57	55	57	53	51	60	58	45	34	34	39	49	52	47	46	48	42	42	35	33	43	54	59	53	48	54	51	....	48.	
Beach	Maximum...	76	80	79	63	67	68	73	74	79	75	68	59	66	77	78	72	70	76	74	65	61	67	69	68	75	83	72	71	75	78	....	72.	
	Minimum...	43	51	54	63	54	53	47	56	60	59	49	38	38	38	52	59	42	45	51	42	38	36	43	50	52	59	56	48	54	52	....	49.	
Bismarck ¹	Maximum...	72	80	84	68	72	68	75	75	83	78	71	56	64	75	77	73	74	75	73	68	63	65	69	57	68	80	77	72	75	79	....	72.	
	Minimum...	52	52	61	59	57	56	46	53	64	59	52	40	42	47	46	58	49	50	50	45	42	41	33	45	54	58	54	50	57	51	....	50.	
Bottineau	Maximum...	68	70	80	76	73	74	79	78	80	75	68	55	62	75	77	73	68	72	71	70	51	53	63	65	60	75	71	76	75	74	....	70.	
	Minimum...	46	50	50	57	60	53	50	49	50	50	50	34	33	42	49	40	45	46	45	47	45	41	39	43	51	53	58	47	53	50	....	47.	
Carson	Maximum...	75	81	83	69	76	68	75	74	84	77	64	62	66	86	77	73	74	70	69	63	68	71	59	72	77	68	70	71	70	77	....	72.	
	Minimum...	46	51	59	55	57	53	45	51	60	54	52	38	35	45	46	51	43	53	40	40	36	33	46	52	55	54	52	46	50	48	....	48.	
Crosby	Maximum...	75	73	75	73	66	70	77	78	80	72	70	57	64	78	83	67	60	54	62	54	50	58	60	59	75	79	77	69	72	72	....	68.	
	Minimum...	46	46	45	49	54	53	47	50	53	50	46	32	30	32	46	51	45	46	48	45	40	39	32	33	48	52	58	49	48	53	....	45.	
Devils Lake ¹	Maximum...	67	75	81	73	72	71	75	75	81	80	68	53	62	73	72	73	72	71	76	64	55	51	62	61	61	68	71	75	74	75	....	69.	
	Minimum...	45	54	58	53	60	53	45	53	60	58	51	40	39	46	49	54	49	52	48	46	42	42	44	45	53	58	58	52	57	53	....	50.	
Dickinson Airport ³	Maximum...	71	76	78	66	70	65	71	72	78	73	65	55	64	74	75	69	70	74	68	63	60	66	66	55	69	77	61	72	74	75	....	69.	
	Minimum...	48	51	56	57	54	52	46	52	60	47	48	38	37	45	50	50	44	45	45	42	41	37	37	49	53	56	48	48	56	49	....	48.	
Dunn Center	Maximum...	75	79	77	69	70	68	74	73	79	74	67	56	64	75	78	70	71	73	69	61	58	65	66	54	69	79	64	73	75	77	....	70.	
	Minimum...	45	45	52	55	54	53	44	51	55	55	51	36	34	40	49	51	40	46	49	42	40	36	33	40	48	52	57	46	53	48	....	46.	
Fargo ¹	Maximum...	64	78	81	80	69	71	76	78	84	72	57	63	73	72	60	75	75	78	73	62	56	63	69	66	68	82	77	77	82	.....	72.		
	Minimum...	53	56	58	56	52	58	56	51	62	60	54	44	37	43	57	53	54	52	50	50	44	48	47	39	57	61	66	58	57	55	....	53.	
Fessenden	Maximum...	65	79	80	79	72	70	76	75	82	80	77	70	64	69	76	74	74	72	77	73	59	56	67	66	63	75	74	72	74	76	....	72.	
	Minimum...	43	50	56	51	55	51	41	48	57	61	52	35	36	39	54	55	48	49	46	45	43	41	34	42	50	58	60	48	51	52	....	48.	
Fullerton	Maximum...	68	80	81	78	70	67	78	76	79	81	76	66	62	75	73	72	76	74	75	71	63	63	69	63	67	72	79	75	78	78	....	72.	
	Minimum...	52	54	60	59	59	59	51	55	60	59	60	45	37	41	51	56	49	50	33	48	43	41	37	44	54	62	63	54	55	55	....	51.	
Garrison ³	Maximum...	70	78	80	70	74	70	73	72	81	76	68	56	62	76	76	71	72	72	71	61	57	64	68	54	69	77	73	74	73	75	....	70.	
	Minimum...	48	49	55	56	58	51	45	52	60	57	48	36	34	42	47	53	46	47	48	43	40	33	42	50	58	51	49	55	50	....	48.		
Grafton	Maximum...	67	80	82	81	77	75	76	79	84	83	82	64	65	75	74	72	75	74	75	72	63	56	64	69	66	70	72	79	79	78	....	73.	
	Minimum...	49	42	54	52	60	57	46	47	58	66	51	38	37	39	51	53	53	53	46	47	45	43	49	42	54	57	63	56	53	58	....	50.	
Grand Forks Airport ³	Maximum...	66	77	80	80	75	77	77	78	81	84	67	53	61	73	73	62	76	71	70	70	57	58	62	67	65	72	75	78	76	77	....	71.	
	Minimum...	51	56	55	50	60	54	49	51	57	57	52	41	38	38	52	53	52	51	47	49	44	45	47	41	56	58	63	56	53	49	....	50.	
Jamestown Airport ³	Maximum...	64	76	79	75	70	69	74	74	78	79	70	56	62	72	71	75	74	71	75	68	57	62	68	60	64	70	74	74	74	71	....	70.	
	Minimum...	51	52	58	57	58	53	48	48	60	55	49	38	39	40	53	56	47	51	48	46	41	42	38	40	54	61	57	51	53	52	....	49.	
Kenmare	Maximum...	74	76	81	73	67	69	78	76	80	73	70	60	44	76	80	70	65	73	67	55	52	61	67	59	70	78	70	74	75	75	....	74.	
	Minimum...	46	49	53	53	56	51	45	34	59	60	53	35	31	41	52	55	47	50	50	45	41	41	36	40	49	51	60	51	54	54	....	48.	
Langdon	Maximum...	65	77	83	78	74	74	75	76	80	78	77	58	64	72	72	69	72	71	75	68	55	52	63	68	63	65	72	75	77	....	70.		
	Minimum...	40	51	53	48	57	51	41	48	58	62	44	35	31	39	47	50	45	48	43	44	39	36	42	44	52	55	58	51	50	50	....	47.	
Marmarth	Maximum...	74	71	76	73	71	68	73	70	77	74	68	57	66	77	79	71	72	75	70	64	63	68	68	67	71	82	70	73	75	77	....	71.	
	Minimum...	42	57	54	60	57	53	50	50	62	53	48	40	38	45	51	46	44	49	53	52	40	35	35	51	57	62	54	57	55	48	....	49.	
Minot ³	Maximum...	73	81	82	74	69	70	76	75	81	76	71	57	65	77	80	73	72	73	72	70	59	64	68	67	81	82	76	74	75	77	....	71.	
	Minimum...	46	48	50	51	58	46	37	51	61	56	50	36	32	46	42	44	45	46	46	42	41	38	28	46	50	59	51	50	55	50	....	46.	
Mott	Maximum...	72	80	80	75	74	69	71	74	81	75	75	64	65	75	77	72	74	78	77	68	65	68	70	67	73	82	75	72	76	78	....	73.	
	Minimum...	49	56	59	60	56	54	46	50	61	55	51	37	37	47	49	49	38	48	53	41	39	33	34	53	53	57	54	49	48	51	....	48.	
Pembina Airport ³ ...	Maximum...	66	79	82	78	79	74	76	81	85	82	70	52	63	74	76	62	74	66	76	66	65	65	55	54	64	71	70	74	79	76	....	71.	
	Minimum...	42	54	53	39	62	54	43	50	60	54	46	38	36	42	54	52	54	53	45	45	44	42	42	56	58	63	57	55	48	....	49.		
Sharon	Maximum...	59	78	84	75	69	69	76	77	81	71	63	65	41	61	69	62	76	71	75	68	57	53	75	60	61	63	71	77	77	78	....	70.	
	Minimum...	44	53	59	54	57	54	48	53	59	67	52	39	35	41	51	51	49	50	48	44	42	43	43	43	53	57	60	51	53	52	....	50.	
Steele	Maximum...	67	80	81	78	70	73	73	73	79	76	68	66	59	72	73	72	73	71	71	66	58	62	65	64	63	75	76	70	72	75	....	70.	
	Minimum...	48	48	59	55	55	57	46	50	59	60	53	39	35	42	45	55	45	47	48	41	39	38	31	44	51	60	61	47	53	49	....	48.	
Valley City	Maximum...	61	75	79	79	70	68	73	75	79	82	81	63	60	73	73	70	75	73	77	77	68	67	63	65	65	66	75	78	75	79	....	72.	
	Minimum...	53	55	58	58	60	58	52	50	59	68	53	43	38	38	53	53	48	51	48	46	44	43	39	47	53	59	62	54	53	55	....	51.	
Wahpeton	Maximum...	63	75	82	81	80	75	74	73	78	82	82	72	63	75	74	70	75	75	76	74	72	60	70</											

Daily Precipitation for June 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Casselton	Red				.06	.96							.39			.02	.05	.21			T					.18	.02		.43				2.36
Cooperstown 2	Sheyenne		.04	1.09	.02	.27	.06			T			.40	T		.10	.08			T	T				T	.78	.03	.1.08	.08	.03			4.06
Courtenay	James			.13	.40	.16							.72	.52		.32					.01				.25	.12	.02	.64	T			3.46	
Devils Lake 1	Devils Lake		.17		.08	T	T			T			.17	.01	T	.11	.13	T			.05		T	.13	.25	.12	.03	.1.51	T			2.63	
Edgeley	James		T		T		.12	.50	.08							.12		.06							.66	.39	.02	.48	.19			2.62	
Edmore	Devils Lake		.05										.19			.07	.05									.35		1.10		.10		1.91	
Ellendale	James		.01		2.59	T	.34						.11			.11	.01								.97	.94		1.26	.02	.03		6.39	
Fargo 1	Red		T		.82	.28				T			.17	T		T	.54	T					.01	.04	.94	T	.45	.01	T			2.32	
Forman	Sheyenne					.80	.43	.05									.31				T				.48	.51		1.33			.10	4.01	
Fullerton	James			T	1.55	1.66	1.15			T	T		.12			.02		T							.55	1.02	T	1.50	.02	T		7.59	
Grafton	Red					T						.09	.61	T		.32	.21	T	T	.47	T		.08	.04	.05	T	.27	.18	.04		1.49		
Grand Forks Airport 3	do			T	.12	.02										.21	T	T	.07			T		.01	T	T	.79	T		.12	2.06		
Hankinson 2	do				1.10	T	.68						.30	.08			.32	.32	.16		.03		.15		.60	.02	T		.40		T	3.39	
Hannah	Pembina					.10										.35				.05					.10	T	.60	1.80	.05			3.50	
Hillsboro	Red				.28	.05	.03				.05	.12				T	.16	.04					.10	T	T	.03	.76		.06			1.62	
Jamestown Airport 3	James			.13	.35	.24	.21					.26	T		.20		.02	T		T				.39	.46	T	.65	.01	T		2.92		
Langdon	Pembina											.10				.11	.01			.02			.08			.07	.01	.75	.46	.03		1.64	
Larimore	Red		T	.13		.12						.25				.22							T			.17	.75		.07			1.71	
Lisbon	Sheyenne		T		1.70	.04	.15				.02		.15			.01		.07					T		T	.51	.12	T	.83	T	T	3.60	
Mayville	Red			.07	T	.42						.28				.45												.80	T			2.02	
McHenry	James		.11	2.18	.03		.01				T	.22	.03		.32	.11	.29			.24		.05			.10	.06	.04	1.01	.01	.03		4.59	
McLeod	Sheyenne					.23	.10	.16								.29										.36						1.25	
Oakes	James				2.15	.30	.44									.02										.75	.14	.07	.56			4.50	
Park River	Red		.10									.21	T		T	.24		T	.46			T						.48	.26	T		1.75	
Pembina Airport	do				T	T						.23	T		T	.28	T	.01	.08		T	T	.01		T	T	.53	.01	T		T	1.15	
Petersburg	do			.12		.04						.20				.10	.28									.12	.79			.05		2.14	
Sharon	do		.01		.21	.02	.13	.04		T		.32	T		.09	.02	.21					T	.01		.07	.07	.03	.90	T	T	.02	1.75	
Valley City	Sheyenne		T	T	T	.07	.60		T			.43			.30	.09	.25				.30				.12	.14	.01	.33		.07	.05	2.46	
Wahpeton	Red		T			.55	.04	T				.12	.05			.58									T	.35		.06	.15	.03	T	1.93	
Middle Division																																	
Ashley 3	Missouri		.04	T	.03	.13	T	1.95		T	.22		.20			.48		.12	.03		T				.10	1.12	.01	.01	.28	.01	.06	.04	5.73
Bisbee	Deville Lake											.11	.12				.04									.36	T	.62	.05			1.40	
Bismarck 1	Missouri		.13		.04	.36	.01	.24		.04	.02	.08	.04		T		.06				.12					.35	T	.43	T	.29		2.21	
Bottineau 2	Mouse							.10			.42	.25					.06			.07				.10	.13	T	.16	.02	.01	.26	.04	.02	1.64
Carrington	James		.03	.09	.08	.20	.08	.07	.09			T	.17	.03			.09	.02			.06			T		T	.36	.15	.03	.59	.02	.01	2.02
Carson	Heart				.25	T	.26			T	.16	.37					.06				.08			1.42		.68	.10		.38	.03	.18	T	3.80
Center	Missouri		T	.66	.05	.04	T	.07		.03	.02	.18					.06				T					.28	.08	.02	.46	.19	.10	2.56	
Dogden Butte	Mouse			.28	.26	T	.06				.24	.11			.10		.15				T					.28	.08	.02	.46	.19	.10	2.12	
Drake 2	do			.55	.07		.02	.01				.05	.06	.05	.10		.15									.27	.01	.03	.29	.17	.10	1.93	
Dunseith	do					.18				.02	.12	.20				.08	.05	.14	.02				.18			.28	.03	.47			.02	1.86	
Eckman	do					.11	.03				.10	.05				.08						T				.04	.07	.01	.24	.32	.03	1.13	
Euergy	Missouri		.75	.10	.45	T	.48			T	.10	.35					.11			.03						.43		.01	1.03	.18	.10	4.00	
Fessenden	James		.42	.28	.17		.22					.23				.57	.11									.28	.03			T	.08	3.77	
Fort Yates	Missouri				.17	1.40		.33				.34					.18	.28	.06							.66		1.00	.13	.17		4.72	
Foxholm (near)	Mouse					.02				.05	.19						T	.14		.05		T				.15	.04	T	.10	.03	.23	1.00	
Gackle	James			.05	.10	.36	.38	.03		.05	.19	.66	T													.48	.10	.05	.48	T	.22	T	2.96
Garrison 3	Missouri		.44		.32		.39				.04	.31					.03			.12						.38	.01	T	.57	.28	.14	3.03	
Granville	Mouse																																
Hansboro	Deville Lake					.19	T					.21	.02				.05	T		.03			T			.19		.37	.60	.07		1.73	
Linton	Missouri			.12	.56	.02	.21			.07		.38	T		T					.04						.46	.04		1.40	.02	.10	T	3.42
Maddock	Sheyenne		.32	.96	.01		.13				.02	.11					.14							.02		.10	.08	T	.15	.40	.07		3.51
Mandan 2	Missouri		T	.11	.01		.48	T	.20			.06	.17				.09				.11	.02				.12	.24	T	.35	.12	.19	.15	2.42
Max 2	do			.67	.26		.14				.22	.24	.02	.05		.13				T						.48		.34	.15	.35	.02	3.07	
McClusky	do			.68		.58	.21	.04				.04				.14										.41	.05	.04	.36	.38		2.93	
Minot 3	Mouse		T	.02	.02		T	T			.01	.13	.20	.04			.07		.03		T		T			.22	.02	T	1.06	.12	.18	2.09	
Mohall	do																																

CLIMATOLOGICAL DATA

UNIVERSITY OF ILLINOIS

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LI

BISMARCK, N. D., JULY 1942

No. 7

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GENERAL SUMMARY

The month was cool and precipitation was near the average. It was the coolest July since 1927. No 100° temperatures occurred at any stations. The highest temperatures at many stations in the northern part of the state were below 90°. The precipitation was well distributed throughout the month. It was heavy in the northeastern and south-central parts of the state, but it was light over the northwestern and extreme south-eastern sections. Sunshine was below normal. There was some hail damage and a slight amount of wind damage occurred, but the month was mostly excellent for crop growth. Pastures and ranges continued excellent throughout the month.

TEMPERATURE

The mean temperature for the state was 67.1°, or 1.9° below the 1892-1942 average for July. The mean temperature for the eastern division was 67.2°; for the middle division, 66.8°; and for the western division, 67.4°. The highest mean temperature was 71.6° at Mott, and the lowest, 62.0° at Hannah, making a range in mean temperature of 9.6°. The absolute range was 61°, from 97° at three stations in the west on the 11th and 16th, to 36° at Casselton on the 6th. The average daily excess in temperature for the state since January 1, 1942, is 2.5°.

PRECIPITATION

The average precipitation for the state was 2.43 inches, or 0.01 inch less than the 1892-1942 average for July. In the eastern division the average amount was 2.71 inches; in the middle division, 2.86 inches; and in the western division, 1.73 inches. The greatest monthly amount reported was 5.66 inches at Grafton; the least was 0.22 inch at Van Hook. The greatest amount recorded in any 24 consecutive hours was 2.77 inches at Grafton on the 30th. The accumulated excess in precipitation for the state since January 1, 1942, is 1.47 inches.

ERRATA

JUNE 1942—
p. 23: Bowbells, precipitation departure from normal should be +0.20. Pembina
Airport, minimum temperature on the 4th should be 49°.
p. 24: Wishek, precipitation on the 24th should be 0.05 inch.

MISCELLANEOUS PHENOMENA
(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Auroras										1	1				1	1															
Dust storms																															
Fogs	1	3	4	6	2	2	1		1						5	14	8	1	1	2	4	1	1	2	7	11	7	12	10	4	9
Lunar halos																															
Solar halos																															
Hail	6	2	1				1	5	1		3	1																			
Thunderstorms	1	16	2	8	3		10	15	17	1	9	13	6	3	9	10	15	19	2				13	24	12	4	6	2	19	18	18

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck	29.95	30.34	21	29.54	12	8.5	54	nw.	7	88	61	59	64
Devils Lake	29.95	30.29	21	29.53	12	6.7	32	nw.	29	92	56	60	66
Fargo	29.94	30.31	21	29.59	2	9.5	34	ne.	1	88	53	55	66
Williston	29.94	30.38	1	29.45	11	6.2	33	w.	12	87	54	48	70

† And other dates.

COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	68.7	108	31	3.44	2.98	3.28	3.23	0	8	19	8	4	
1893...	69.5	112	35	2.54	1.94	1.64	2.04	0	7	17	10	4	
1894...	71.7	107	38	0.92	0.73	0.25	0.63	0	3	20	8	3	
1895...	66.1	102	29	3.12	2.44	3.13	2.90	0	8	14	11	6	
1896...	67.5	107	31	1.67	1.48	1.37	1.51	0	6	15	10	6	
1897...	68.9	109	38	6.46	4.43	2.40	4.43	0	9	13	11	7	
1898...	67.6	106	28	3.07	2.40	2.00	2.49	0	7	15	11	5	
1899...	68.3	109	32	2.37	2.30	2.35	2.34	0	6	18	9	4	
1900...	67.9	107	33	2.89	2.26	1.60	2.25	0	6	16	10	5	
1901...	70.8	110	40	5.10	4.08	3.66	4.28	0	6	18	7	6	
1902...	67.6	106	34	2.34	2.00	2.10	2.15	0	5	20	7	4	
1903...	66.7	109	26	2.59	1.77	2.32	2.23	0	7	17	8	6	
1904...	64.4	102	34	2.96	2.83	0.60	2.13	0	6	17	8	6	
1905...	65.6	100	32	4.27	3.90	3.17	3.78	0	8	17	9	5	
1906...	66.9	102	34	2.90	1.32	0.45	1.56	0	11	13	8	10	
1907...	65.8	103	31	2.69	3.90	2.60	3.06	0	9	16	11	4	
1908...	68.6	103	31	1.89	2.37	1.46	1.91	0	6	19	9	3	
1909...	67.1	99	34	3.45	2.94	1.80	2.73	0	8	15	9	7	
1910...	70.0	114	33	1.30	2.10	1.40	1.60	0	5	18	9	4	
1911...	65.1	107	23	2.25	1.76	1.10	1.70	0	6	18	10	3	
1912...	66.0	106	30	4.52	3.07	3.38	3.66	0	10	12	13	6	
1913...	65.6	103	35	2.64	2.38	1.65	2.22	0	8	17	8	6	
1914...	72.1	109	36	2.62	1.85	2.03	2.17	0	6	19	9	3	
1915...	62.3	97	30	2.42	2.66	4.30	3.13	0	11	12	11	8	
1916...	73.1	105	33	4.71	2.76	1.41	2.96	0	7	19	9	3	
1917...	70.9	114	27	1.96	1.80	0.87	1.54	0	7	17	11	3	
1918...	65.5	102	34	2.84	2.90	2.46	2.73	0	7	14	10	7	
1919...	71.2	105	37	3.15	1.11	1.32	1.86	0	5	18	10	3	
1920...	68.3	103	31	2.27	2.33	1.73	2.11	0	7	18	11	2	
1921...	71.4	110	35	4.47	2.87	1.88	3.07	0	7	17	10	4	
1922...	65.6	100	30	2.28	2.44	2.72	2.48	0	8	16	11	4	
1923...	71.2	103	35	2.90	3.34	2.91	3.05	0	8	16	11	4	
1924...	65.5	99	32	1.93	2.04	1.83	1.93	0	6	18	9	4	
1925...	66.7	106	29	1.43	1.33	1.30	1.35	0	6	18	9	4	
1926...	70.3	108	32	2.35	1.78	1.99	2.04	0	7	18	8	5	
1927...	65.4	97	28	2.33	3.11	3.09	2.84	0	9	15	10	6	
1928...	67.4	96	38	4.65	5.32	4.49	4.82	0	10	16	10	5	
1929...	70.6	109	34	1.93	1.09	0.78	1.27	0	5	21	8	2	
1930...	72.3	107	34	1.83	0.80	0.49	1.04	0	5	21	8	2	
1931...	70.6	111	37	2.89	3.20	3.01	3.03	0	8	17	8	6	
1932...	70.0	108	36	1.95	2.22	1.68	1.95	0	7	19	8	4	
1933...	71.9	109	36	2.04	2.13	1.83	2.00	0	7	19	9	3	
1934...	71.8	112	29	1.58	1.30	0.77	1.18	0	6	18	10	3	
1935...	73.8	110	45	3.90	5.44	3.90	4.41	0	10	17	11	3	
1936...	79.9	121	38	0.71	0.48	0.92	0.70	0	4	22	8	1	
1937...	71.7	111	40	3.70	2.70	2.40	2.93	0	9	15	10	6	
1938...	69.7	104	39	3.11	3.85	3.05	3.34	0	9	15	13	3	
1939...	72.6	108	37	1.57	1.82	2.04	1.81	0	7	19	9	3	
1940...	71.6	107	37	4.29	3.75	3.05	3.70	0	11	14	13	4	
1941...	70.8	106	34	1.40	1.65	2.23	1.76	0	8	15	12	4	
1942...	67.1	97	36	2.71	2.86	1.73	2.43	0	7	13	13	5	
Period	69.0	121	23	2.77	2.48	2.08	2.44	0	7	17	10	4	

Climatological Data for July 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days			Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Casselton	Cass	961	46	68.6	-1.3	92	17	36	6	1.84	-0.95	0.54	18	0	9	13	14	4	w.	Robert Beard.
Cavalier	Pembina	894	32	67.7	.....	91	23	43	3	3.34	+0.67	1.10	30	0	10	16	6	9	nw.	City Light & Power Co.
Colgate	Steele	1,180	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. L. Haugen.
Cooperstown	Griggs	1,423	45	66.1	-3.5	89	11	42	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Theo. Marquardt.
Courtenay	Stutsman	1,523	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Hanawalt.
Devils Lake	Rainey	1,471	45	65.8	-1.6	89	11	43	3	2.62	+0.22	1.08	17-18	0	9	10	18	3	nw.	U. S. Weather Bureau.
Edgeley	LaMoure	1,563	41	67.7	-2.2	94	17	41	6	1.86	-0.91	0.75	27-28	0	8	7	23	1	nw.	O. A. Thompson.
Edmore	Rainey	1,524	18	63.8	-3.7	86	11	41	17	4.37	+1.62	2.25	30	0	11	20	9	2	se.	Mike Davis.
Ellendale	Dickey	1,457	47	68.5	-2.4	92	17	48	17	3.42	+0.68	0.96	27	0	10	17	9	5	nw.	J. E. Demmer.
Fargo	Cass	895	15	68.8	+0.9	94	17	43	6	0.87	-2.56	0.31	18	0	12	8	14	9	w.	U. S. Weather Bureau.
Foran	Sargent	1,249	49	69.2	-0.9	91	17	44	6	1.52	-1.45	0.48	18	0	4	23	6	2	sw.	Helge Dyste.
Fullerton	Dickey	1,439	44	68.5	-1.7	90	17	45	6	1.69	-1.43	0.85	27-28	0	5	11	15	5	n.	F. O. Alin.
Grafton	Walsh	827	50	67.6	-1.2	88	17	43	3	5.66	+3.11	2.77	30	0	11	12	17	2	nw.	Dr. J. C. Lamont.
Grand Forks II.	Grand Forks	831	51	67.2	-1.3	90	17	42	37	2.55	-0.20	0.86	18	0	8	13	13	5	nw.	U. S. Weather Bureau.
Grand Forks Airport.	Grand Forks	832	2	66.4	.....	91	17	42	6	2.64	.....	0.81	18	0	9	11	13	7	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	69.3	-2.1	93	17	46	6	1.19	-1.35	0.45	19	0	6	2	21	8	se.	Joseph Rhdt.
Hannah	Cavalier	1,568	50	62.0	-4.2	85	22	38	6	4.30	+1.95	1.80	28	0	12	8	13	10	nw.	A. E. Prior.
Hillsboro	Trail	901	42	68.5	-2.2	93	17	43	6	1.57	-1.11	0.80	18	0	6	8	17	6	nw.	Alfred Jahnek.
Jamestown	Stutsman	1,457	50	68.2	-1.4	90	117	43	14	2.03	-0.75	0.68	7-8	0	10	12	10	9	sw.	S. G. Calvelage.
Jamestown Airport	Stutsman	1,494	2	66.7	.....	91	17	43	6	1.61	.....	0.34	7-8	0	14	6	15	10	w.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	65.8	.....	87	11	37	2	3.78	.....	1.71	17-18	0	11	8	18	5	nw.	U. S. Wildlife R. fuge.
Langdon	Cavalier	1,615	46	64.1	-2.2	89	17	37	3	4.44	+2.07	1.25	24	0	16	14	14	3	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	66.9	-1.2	90	117	42	3	3.18	-0.04	1.30	24-25	0	5	13	3	15	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	68.6	-1.8	96	17	42	6	1.82	-1.37	0.66	19	0	8	1	3	10	nw.	J. O. Halverson.
Mayville	Trail	975	46	69.4	-0.8	92	17	47	1	2.47	-0.29	1.27	18	0	4	18	11	2	nw.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	64.6	-3.5	88	11	41	3	1.86	-0.90	0.48	17-18	0	10	11	17	3	w.	C. F. Blasky.
McLeod	Ransom	1,075	31	69.0	-2.4	93	17	42	6	1.59	-1.38	0.75	17-18	0	7	24	5	2	sw.	J. G. Carlson.
McVille	Nelson	1,467	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Kabeary.
Minor	Sargent	1,117	3	69.4	.....	92	9	47	2	2.30	.....	1.12	31	0	5	24	7	0	ne.	E. W. Wilson.
Oakes	Dickey	1,318	13	67.2	-4.5	94	17	44	6	1.98	-0.53	0.92	27-28	0	5	15	4	12	nw.	F. H. Murray.
Park River	Walsh	995	38	65.8	-2.7	88	11	40	37	5.59	+3.09	1.49	25	0	8	21	9	1	nw.	E. J. Taintor.
Pembina Airport	Pembina	803	68	65.8	-2.0	90	11	42	3	3.13	+0.78	1.01	29-30	0	11	11	16	4	w.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. M. Rykken.
Sharon	Steele	1,516	18	66.7	-4.1	90	23	42	6	4.51	+1.81	2.33	24	0	8	7	13	11	nw.	Nels O. Grefsheim.
Valley City	Barnes	1,245	36	68.2	-1.9	90	17	43	6	1.44	-1.37	0.41	27-28	0	9	20	8	3	nw.	I. C. Robertson.
Wahpeton	Richland	962	50	69.4	-1.5	91	17	42	6	0.79	-2.43	0.24	27-28	0	6	17	9	5	se.	W. J. Cavanaugh.
Average for Eastern Division				67.2	-2.3	96	17	36	6	2.71	-0.06	2.77	30	0	9	14	12	5	nw.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	65.2	-4.5	92	17	39	6	3.59	+0.76	1.71	17-18	0	11	9	7	15	e.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lester H. Bowers.
Bisbee	Towner	1,601	39	65.8	-1.6	92	11	40	17	2.26	-0.33	0.93	30	0	7	13	10	8	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	68.6	-1.2	92	16	44	6	3.36	+1.12	0.96	8	0	13	14	10	7	nw.	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	68	68.4	-1.0	92	16	43	6	4.17	+1.93	1.23	7-8	0	13	12	12	7	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	65.9	-1.7	90	117	41	57	1.79	-0.58	0.55	11-12	0	10	19	7	5	nw.	N. D. School of Forestry
Carrington	Foster	1,579	44	65.7	-3.7	90	11	42	27	3.44	+0.86	1.25	24	0	14	20	8	3	w.	Soo Line Agent.
Carson	Grant	2,500	30	68.0	-2.8	93	17	43	1	3.23	+1.20	0.90	9	0	10	15	10	6	nw.	J. W. Evens.
Center	Oliver	.....	4	66.9	.....	90	16	38	6	4.06	.....	1.25	30	0	10	8	22	1	se.	Fred L. Heinz.
Dogden Butte II.	McLean	1,880	16	66.1	-3.9	86	117	42	6	1.71	-0.89	0.96	17-18	0	7	14	9	8	nw.	R. L. Williams.
Drake	McHenry	1,634	13	67.0	-4.6	90	11	41	1	2.58	-0.43	0.65	17	0	10	14	11	6	w.	H. G. Kringen.
Dunseith	Rollette	1,682	46	64.6	-2.4	88	11	42	17	4.17	+1.62	2.00	30	0	14	4	23	4	w.	Geo. Gebres.
Eckman	Bottineau	1,500	37	66.0	-2.0	93	11	40	1	2.95	+0.72	0.75	11-12	0	10	9	17	5	nw.	R. F. Nowak.
Energy II.	McLean	1,750	27	67.7	-4.2	92	23	42	6	2.36	+0.01	0.65	17	0	4	13	16	2	s.	H. S. Solenberger.
Fessenden	Wells	1,610	30	66.6	-2.8	90	16	42	1	2.63	+0.30	0.52	2	0	10	13	14	4	sw.	John V. Zuber.
Fort Yates	Sioux	1,670	42	69.2	-3.5	92	16	44	1	2.75	+0.56	0.70	24	0	9	21	8	2	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	67.2	-2.5	91	11	43	6	1.95	+0.05	0.88	11-12	0	10	5	14	12	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	68.8	.....	90	16	46	17	2.93	+0.32	0.62	28	0	11	16	11	4	nw.	A. H. Haut.
Garrison	McLean	1,925	65	66.8	-2.4	91	16	43	1	2.05	-0.41	1.21	18	0	8	10	15	6	se.	E. L. Vorachek.
Granville	McHenry	1,504	35	68.4	-0.3	91	11	41	1	2.70	+0.53	0.92	16	0	8	23	8	0	nw.	Fred Roble.
Hansboro	Towner	1,597	34	64.0	-2.3	90	23	41	37	4.68	+2.22	2.06	30	0	11	11	15	5	nw.	W. E. Dishar.
Harvey	Wells	1,596	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Orville Hokscho.
Leeds	Benson	1,515	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Carl T. Carlson.
Linton	Emmons	1,711	25	68.5	-4.2	92	16	42	6	2.17	+0.04	0.55	26-27	0	10	14	12	5	se.	Wm. Heyerman.
Maddock	Benson	1,604	27	66.6	-2.3	90	11	43	6	3.56	+0.97	1.14	30	0	10	9	18	4	nw.	A. T. Felland.
Mandan	Morton	1,750	28	68.8	-3.1	93	16	46	6	2.64	+0.26	0.71	8	0	8	9	6	16	nw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	13	67.0	-4.4	90	16	42	1	3.25	+0.54	1.17	18	0	7	11	9	11	.....	A. W. Rice.
McCluskey	Sheridan	1,943	24	67.4	-3.0	88	167	43	17	2.27	-0.26	0.60	18	0	9	14	14	3	nw.	F. W. Perry.
Medina	Stutsman	1,816	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rudolph Graf.
Minot	Ward	1,574	46	66.2	-2.6	90	11	40	6	3.83	+1.93	1.46	16-17	0	8	7	3	21	nw.	Kenneth A. Chatfield.
Mohall	Renville	1,646	49	65.5	-2.0	91	117	40	4	2.63	+0.29	1.06	31	0	12	13	13	5	nw.	Iver Johnson.
Napoleon	Logan	1,955	50	66.6	-2.8	91	16	42	6	2.00	-0.50	0.45	28	0	14	10	3	18	se.	C. J. Hoof.
New Salem	Morton	2,163	38	66.9	-3.9	91	16	44	12	2.70	+0.52	1.04	17-18	0	8	11	9	11	sw.	Wm. F. Gaebe.
Pettibone	Kidder	1,856	33	64.8	-4.7	86	11	42	6	2.29	-0.55	1.32	17-18	0	10	9	16	6	nw.	Sam Loepcke.
Rolla	Rollette	1,860	5	66.7	.....	89	23	42	3	4.45	.....	1.23	23	0	10	12	13	6	nw.	A. A. Jacobsen.
Rugby	Pierce	1,562	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. B. Pater-on.
Ryder	Ward	2,108	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. C. Schellenbaum.
Selfridge	Sioux	2,183	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. B. Smith.
Steele	Kidder	1,857	48	66.4	-3.8	88	16	43	6	2.33	-0.66	0.78	17-18	0	9	11	10	10	se.	Mrs. R. S. Armstrong.
Tagus (near)	Ward	2,179	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

EXPLANATORY NOTES. — The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. Departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 35-year period; for stations of 10 to 14 years the means for the period of record are used. Precipitation averages are computed from totals on precipitation page. Reference letters appearing in the table indicate number of days missing; for example, ^b represents two days, etc. † Also on other dates. T. Precipitation is less than 0.01 inch of rain or melted snow. If Post-office addresses of these stations are: Berthold Agency, Elbowoods; Dogden Butte, near Butte; Energy, Underwood; Grand Forks, University; Howard, Grenora; Mary, Grassy Butte.

Climatological Data for July 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Alpha	Golden Valley	15	15	68.7	-1.7	92	7	42	20	2.39	+0.33	0.51	27	0	7	24	2	5	nw.	H. A. Bury.
Amidon	Slope	2,908	19	68.7	-1.7	92	7	42	20	1.70	-0.52	0.54	15-16	0	10	26	3	2	se.	Stanley W. Bale.
Beach	Golden Valley	2,759	36	68.6	-1.3	97	11	41	1	1.72	-0.09	0.58	17-18	0	9	5	23	3	nw.	J. C. Russell.
Berthold Agency II	McLean	2,082	48	67.8	-2.1	95	16	42	21	1.03	-1.33	0.40	31	0	10	12	18	1	nw.	H. W. Case.
Bowbells	Burke	1,958	13	64.6	-1.9	88	107	40	1	2.41	+0.21	1.45	16	0	7	12	7	12	w.	Charles Kaufman.
Bowman	Bowman	2,872	27	67.4	-3.5	93	117	46	2	1.25	-0.88	0.39	27	0	8	14	3	14	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	33	65.2	-2.7	92	16	43	17	1.80	-0.31	1.11	16	0	6	9	15	7	nw.	J. H. Phelps.
Dickinson	Stark	2,543	49	66.0	-3.0	91	8	42	21	2.39	+0.22	0.88	8	0	11	15	12	4	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,583	2	66.7	.....	90	77	42	1	3.32	.....	0.72	18	0	11	8	20	3	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	66.6	-2.4	95	16	40	13	1.38	-0.85	0.70	29	0	11	10	19	2	se.	O. T. Evenson.
Epping	Williams	2,224	31	68.8	-2.0	92	16	42	1	1.53	-0.45	0.72	25	0	4	20	9	2	nw.	T. Beachler.
Fairfield	Billings	.....	5	.....	.....	.....	.....	.....	.....	2.89	+0.70	0.80	7	0	11	22	6	3	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	66.4	.....	90	16	45	1	2.93	+0.74	1.18	30	0	12	14	12	5	nw.	Verne King.
Golva	Golden Valley	2,780	2	67.6	.....	95	16	41	1	2.52	.....	0.87	29	0	11	9	19	3	nw.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	2	.....	.....	.....	.....	.....	.....	1.33	.....	0.52	29	0	8	8	21	2	se.	Thom. C. Lorenzen.
Hettinger	Adams	2,755	34	68.4	-3.3	92	77	46	21	2.81	+0.45	0.77	18	0	11	20	9	2	nw.	C. J. Austad.
Hettinger II (near)	Williams	2,275	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. P. Amsbaugh.
Kenmare	Ward	1,799	10	67.2	.....	90	23	44	1	0.98	-1.31	0.42	16	0	4	15	7	9	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	69.1	-2.1	96	117	44	21	1.44	-0.44	0.38	26	0	8	15	12	4	nw.	S. P. Grane.
Mary	McKenzie	.....	13	.....	.....	.....	.....	.....	.....	1.27	-0.55	0.70	6-7	0	6	21	8	2	nw.	Fred Hartman.
Medora	Billings	2,271	26	.....	.....	.....	.....	.....	.....	2.18	+0.31	0.70	24-25	0	8	23	7	1	nw.	Ovide E. Grenier.
Mott	Hettinger	2,424	34	71.6	0.0	97	16	45	21	2.29	+0.15	0.47	26	0	14	20	7	4	nw.	P. G. Wick.
New England	Hettinger	2,400	47	69.4	-1.1	95	77	44	1	2.26	+0.19	0.73	25-26	0	7	9	19	3	se.	F. S. Sleight.
Parshall	Mountrail	1,929	26	65.1	.....	95	16	38	6	0.78	-1.22	0.31	23	0	8	4	27	0	se.	C. E. Shubert.
Portal	Burke	1,954	36	65.4	-2.6	91	11	39	13	1.27	-0.84	0.65	17	0	6	9	14	8	nw.	R. G. Wegener.
Powers Lake	Burke	2,205	36	64.3	-6.8	91	16	37	6	2.29	-0.30	1.03	10	0	6	11	16	4	sw.	Geo. B. Gee.
Richardton	Stark	2,467	25	68.0	-3.1	90	16	47	1	2.57	+0.32	1.30	8	0	8	7	16	8	se.	Assumption Abbey.
Sanish	Mountrail	1,835	16	65.6	-5.1	96	16	40	21	0.34	-1.71	0.22	12	0	4	14	16	1	.....	H. J. Bugge.
Stanley	Mountrail	2,258	4	65.8	.....	90	117	41	1	1.40	.....	0.50	5	0	6	11	17	3	nw.	Leroy Edwards.
Tioga	Williams	2,279	13	.....	.....	.....	.....	.....	.....	0.68	-1.14	0.35	31	0	4	19	11	1	nw.	B. V. Olson.
Trotters	Golden Valley	.....	16	.....	.....	.....	.....	.....	.....	1.70	+0.14	0.40	18	0	9	5	24	2	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	2	.....	.....	.....	.....	.....	.....	0.22	.....	0.11	17	0	3	22	9	0	w.	Soil Conservation Serv.
Watford City	McKenzie	2,084	28	68.2	-2.9	94	16	41	1	1.22	+0.39	0.58	31	0	9	10	20	1	nw.	J. C. Zeller.
Willrose	Williams	2,258	14	.....	.....	.....	.....	.....	.....	1.64	-0.23	0.86	31	0	10	16	8	7	nw.	L. Holter.
Williston	Williams	1,878	62	68.6	-0.3	93	16	46	1	1.14	-0.75	0.28	7-8	0	9	12	14	5	se.	U. S. Weather Bureau.
Average for Western Division				67.4	-2.5	97	117	37	6	1.73	-0.35	1.43	17	0	4	14	13	4	nw.	.....
Average for the State				67.1	-1.9	97	117	36	6	2.43	-0.01	2.77	30	0	7	13	13	5	nw.	.....

Daily Temperatures for July 1942

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum...	68	73	75	75	70	71	84	84	85	85	83	78	77	75	81	90	92	73	75	70	76	79	83	76	78	75	64	73	82	77	74	77.5
	Minimum	44	47	44	53	43	39	50	62	60	57	62	54	53	49	62	67	65	57	50	49	45	51	54	57	50	51	55	54	53	54	51	53.0
Beach	Maximum...	78	78	83	87	84	81	95	93	87	90	97	87	82	84	91	95	86	79	74	75	82	94	91	85	80	73	63	80	88	79	86	84.1
	Minimum	71	75	80	82	71	75	87	84	86	88	91	80	78	81	90	92	84	77	77	72	79	86	87	80	80	69	65	75	86	78	81	80.2
Bismarck ¹	Maximum...	48	50	50	54	53	43	56	62	62	58	66	57	54	57	64	66	65	56	53	54	49	52	61	60	56	56	57	60	58	60	58	56.6
	Minimum	74	72	69	74	70	76	83	81	80	85	90	72	73	79	80	82	82	75	72	80	84	90	90	85	80	75	77	80	85	74	74	78.7
Bottineau	Maximum...	42	44	48	44	41	41	51	59	56	55	60	55	47	53	60	65	60	60	50	54	57	61	64	45	58	45	45	55	58	59	54	53.1
	Minimum	73	74	85	82	74	76	90	88	86	90	88	84	79	75	86	92	93	77	75	72	80	86	89	84	81	75	64	73	84	76	79	81.0
Carson	Maximum...	43	46	51	55	56	48	54	49	56	60	67	57	52	56	65	68	62	62	49	52	46	59	60	53	58	55	53	53	57	55	52	55.1
	Minimum	73	78	75	75	71	78	91	86	79	82	91	69	76	81	82	92	81	77	69	76	84	91	86	80	75	74	75	80	88	71	76	79.4
Crosby	Maximum...	43	43	50	49	53	46	46	58	55	52	55	48	46	46	57	57	56	51	51	47	48	51	53	56	47	51	53	54	53	53	51	51.1
	Minimum	73	78	75	75	71	78	91	86	79	82	91	69	76	81	82	92	81	77	69	76	84	91	86	80	75	74	75	80	88	71	76	79.4
Devils Lake ¹	Maximum...	43	43	50	49	53	46	46	58	55	52	55	48	46	46	57	57	56	51	51	47	48	51	53	56	47	51	53	54	53	53	51	51.1
	Minimum	71	70	67	74	66	74	80	80	83	84	89	80	75	74	81	81	84	69	71	73	77	84	87	77	78	72	75	77	83	76	73	76.9
Dickinson Airport ³	Maximum...	45	51	43	47	50	47	55	55	58	56	63	56	51	52	61	62	62	60	54	53	53	56	60	63	57	51	52	58	60	55	49	54.7
	Minimum	70	76	80	83	69	76	90	84	81	85	89	75	77	75	89	90	83	74	72	70	78	86	87	78	78	61	63	76	85	72	80	78.6
Dunn Center	Maximum...	42	50	51	50	51	51	54	59	57	55	63	53	51	59	64	65	62	56	51	52	48	52	57	54	56	55	55	58	60	55	53	54.8
	Minimum	71	76	79	81	70	76	91	86	82	88	89	78	81	80	87	95	86	77	74	70	82	89	88	84	81	69	68	82	90	72	82	80.8
Fargo ¹	Maximum...	43	47	50	48	52	44	47	58	56	52	58	54	40	51	58	66	61	62	50	54	42	45	50	56	55	54	52	55	58	57	50	52.5
	Minimum	73	77	69	72	69	76	83	86	90	86	89	88	79	84	80	85	94	82	81	73	79	85	88	84	82	78	77	81	84	82	79	81.1
Fessenden	Maximum...	47	51	49	55	48	43	50	62	63	55	62	64	57	48	62	66	65	61	55	48	54	57	61	58	56	60	60	60	62	54	56.4	
	Minimum	73	76	72	73	75	75	83	80	85	87	88	83	77	82	84	90	85	75	72	68	78	85	88	84	85	75	75	78	85	83	77	79.9
Fullerton	Maximum...	42	48	44	49	46	44	52	55	58	53	59	62	49	51	61	62	63	60	52	55	48	54	53	60	55	47	50	54	55	60	48	53.2
	Minimum	76	75	76	77	70	77	85	85	86	86	89	83	79	79	81	86	90	73	78	76	78	82	84	80	80	69	69	75	83	78	76	79.7
Garrison ³	Maximum...	47	49	49	52	59	45	56	62	65	60	63	69	55	55	63	68	68	65	53	56	48	52	55	58	55	54	59	60	66	62	57	77.0
	Minimum	72	78	79	79	69	75	87	84	85	87	88	78	79	81	84	91	87	77	73	74	79	85	89	81	81	72	70	78	87	75	77	80.0
Grafton	Maximum...	43	48	47	48	51	44	54	60	58	51	59	56	48	54	59	65	62	57	52	54	47	52	56	57	55	54	52	55	57	55	52	53.7
	Minimum	74	69	69	74	73	77	84	83	86	84	87	87	79	84	81	79	88	85	75	76	81	86	87	84	81	76	78	79	84	83	73	80.3
Grand Forks Airport ³	Maximum...	52	54	43	47	55	44	47	51	56	57	60	64	52	48	59	64	67	62	55	57	48	58	55	61	59	57	49	58	58	62	52	54.9
	Minimum	44	54	43	45	48	42	49	48	59	57	59	58	54	49	59	65	65	59	57	52	48	55	54	59	57	53	47	60	67	57	55	53.9
Jamestown Airport ³	Maximum...	70	74	70	75	67	73	84	83	85	85	86	90	76	80	85	82	91	70	76	72	79	84	84	81	80	75	69	77	83	78	75	78.7
	Minimum	47	49	47	53	49	43	51	60	62	55	62	56	52	51	63	65	64	54	51	47	51	54	58	53	53	58	59	54	60	58	54	54.7
Kenmare	Maximum...	75	79	73	77	71	77	85	85	84	89	89	72	77	80	88	84	84	78	71	77	84	88	90	84	80	77	76	82	87	74	75	80.4
	Minimum	44	49	49	49	53	45	50	59	59	55	60	56	48	52	57	65	69	60	53	55	52	51	61	58	59	48	50	55	54	56	53	54.0
Langdon	Maximum...	73	70	65	72	70	75	82	79	81	83	85	81	74	75	81	89	86	72	76	78	86	82	85	80	74	75	76	82	80	72	78.0	
	Minimum	41	50	37	43	46	40	47	47	51	52	55	59	46	46	55	67	61	56	50	53	48	50	50	55	53	48	45	53	53	58	42	50.2
Marmarth	Maximum...	72	80	83	87	78	80	92	92	89	89	96	84	81	84	94	96	86	79	78	75	83	80	92	89	82	75	70	78	85	81	85	83.7
	Minimum	46	47	51	48	53	56	57	62	48	55	61	57	53	61	63	63	60	63	50	45	44	45	62	50	52	55	56	58	57	54	58	54.5
Minot ³	Maximum...	72	79	80	77	68	77	87	85	85	89	90	78	77	82	86	88	83	77	77	75	83	87	89	78	80	73	75	79	85	74	76	80.4
	Minimum	41	41	42	46	48	40	55	60	56	49	58	49	46	53	58	62	62	55	44	55	46	56	70	57	57	47	47	58	56	55	53	52.0
Mott	Maximum...	72	80	85	85	81	80	94	91	88	90	94	88	84	82	94	97	92	86	82	72	83	93	92	83	82	76	69	80	88	82	84	84.8
	Minimum	57	51	50	53	52	57	56	54	57	56	64	50	56	55	65	69	62	62	49	52	45	62	62	65	62	65	67	67	69	63	56	58.5
Pembina Airport ³	Maximum...	71	64	68	72	68	70	80	78	83	81	90	80	73	79	81	87	88	71	75	74	80	88	89	82	81	74	80	82	85	76	75	78.5
	Minimum	43	47	42	46	49	45	49	50	55	58	58	53	48	56	61	67	58	54	55	47	52	57	60	59	55	49	52	56	57	52	53.1	
Sharon	Maximum...	71	72	67	73	69	77	83	82	85	86	88	83	79	80	84	76	88	76	78	75	81	86	90	83	81	76	77	82	79	75	79.4	
	Minimum	43	51	45	46	51	42	49	54	57	53	61	67	50	51	58	61	64	60	53	53	48	53	55	57	56	54	55	57	57	60	53	54.0
Steele	Maximum...	67	72	78	76	74	72	83	82	84	83	87	84	74	78	84	88	85	85	73	68	74	81	83	77	76	71	64	83	75	76	77	77.9
	Minimum	46	45	46	47	58	43	52	60	60	61	65	62	50	52	61	63	65	63	65	54	46	50	55	59	53	53	54	53	55	60	57	54.9
Valley City	Maximum...	75	75	75	73	72	74	82	83	87	85	88	85	81	81	82	82	90	89	77	75	77	84	85	82	81	76	74	77	82	82	77	80.3
	Minimum	49	51	46	53	52	43	49	60	62	56	62	72	56	50	63	66	65	63	55	56	46	50	52	58	55	58	58	58	56	60	56	56.0
Wahpeton	Maximum...	74	76	75	72																												

Daily Precipitation for July 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton	Red				T	.10			.07					.02		.04			.54	T						.24		.09	.32		.42		1.84	
Cooperstown 2	Sheyenne	T	.01	T		.08			.04									.10	.20		.03	T				.38			.03		.15		2.02	
Courtenay	James		.46	T		.52			.21						T			.40	.68		.05					.03		.22		.05			2.62	
Devils Lake 1†	Devils Lake	.24	.02		T	.02			.29					.05		T		.09	1.31	.17	.01				T	.51			T	.88	.33	.33	4.25	
Edgeley	James					.07			.49									.01	.05	.25						.24		.40	.35				1.86	
Edmore	Devils Lake	.10	.38						.35				.17					.07	.52	.03						.06	.41				2.25	.03	4.37	
Elleudale	James							.02	.34				T	.02				.14	.37							.47	.32		.96	.77	.01		3.42	
Fargo 1†	Red	.06	T	.11	.01	.09			T	T			T	.02	.04	.01	.01	T	.31		T					T	.01	.18	T	.18	T	.02		0.87
Forman	Sheyenne		T						T									T	.48		T					T	.42		.40	.22	T		1.52	
Fullerton	James							.25	T									T	.25		T					T	.34		.49	.36	T	T		1.69
Grafton	Red		T	.45		.02			.94				.12					.02	.60		.04					.18	T			.21	.77	.31	5.66	
Grand Forks Airport 3†	do		.02	.27		T			.55				T					.81		T						.37	.03			.01	.45	.13	2.64	
Hankinson 2	do		T	.10	.13	.10			.02									.45		T										.39			1.19	
Hannah	Pembina		.20	T					.60				.55					.05	T	.25	.05	T				.20	T	.30		1.80	.15	.10	4.30	
Hillsboro	Red	.04	.11		T	.11			.37									.80								T	.07					.14	T	1.57
Jamestown Airport 3	James		.10	.10	.09	.17		.14	.20				T	.01	.09	T	T	.03	.28		.03					T	.07		.04	.26			1.61	
Langdon	Pembina	.12	.16	T		.05			.37				.70		.09	.09	.01	.10	.32	.02	.05				1.25	.01	.04		.38	.77			4.44	
Larimore	Red		.15						.28				T					T	.22														3.18	
Lisbon	Sheyenne	T		.12		.13			.02									T	.06	.66						1.30							1.82	
Mayville	Red								.60									.12														.45	2.47	
McHenry	James	.19	.11			.18			.05									.05	.43	.05						.42	.13				.25		1.86	
McLeod	Sheyenne				.19	.23			T									.02	.73								.11		.23		.08		1.59	
Oakes	James							.27	.05										.77		T					.90	1.49			.52		1.07	.28	5.59
Park River	Red	T	.07			T			.49				.29					.14	.11	T						.28	.16		.07	.76	.25	.15	3.13	
Pembina Airport	do		.25	T		T			.67				.29					.14	.11	T						.28	.16						3.52	
Petersburg	do	.04	.22						.43				.04					.14	.11	T						.02							4.51	
Sharon	do	.01	.15			.07			.60				T					1.24	T	T						1.91	.42			.10	.31		.11	1.44
Valley City	Sheyenne		.09	.18	T	.21		.15						.05				.25			T												0.79	
Wahpeton	Red		T		.05	.16			T									.20									.14		.11	.13				
Middle Division																																		
Ashley 3	Missouri					T			.28	.45			T	.01	T	T	.01	1.32	.39		T					.20	.02	.09	.81	T			3.59	
Bisbee	Devils Lake	.20							.27	.32			T					.13	.32								.40	.01			.93	T	2.26	
Bismarck 1†	Missouri	.26	T	T				.97	.35	.12			T	.04	T	T		.04	.49							T	.04		.09	.33	.03	.48	4.17	
Bottineau 2	Mouse	.09				.05			.20					.55	T			.34		.05	.05						.05						1.79	
Carrington	James	.15	.18		.18	.03		.16										.02	.89	T	.06					1.25	.34	.03	.04	.01	.10		3.44	
Carson	Heart							.30	.90					.12				.09	.66							.15		.67	.21		.05		.08	3.23
Center	Missouri				.08		1.10	.85					T					.02	.48		T					.10			.12		.04		1.25	4.06
Dogden Butte	Mouse	.08			.32			.06					T					.58	.38	T	.07										.22	T	1.71	
Drake 2	do			.03		.03			.06									.65	.46	.23	.02					.66	.41				.60	.09	2.58	
Dunselth	do	.30	.04		T			.36		.22								.05	.18	.25	.01					.35	.08			.02	.27	.04	2.00	4.17
Eckman	do	.07	.05	.04									.75		T			.02	.62	.07						.15				T	.59	.59	2.95	
Enberg	Missouri				T				T									.65	.60							.58							2.36	
Fessenden	James	.52			.11			.41					.17		.07			.13	.43		.04					.70		.35	.07		.47	.28	T	2.63
Fort Yates	Missouri	.47					.29	.30	.09				.03					.03	.45							.70							2.75	
Foxholm (near)	Mouse			.03	.02				.08	T			.06	.82				.69	.03	.04	T					.08	.02				.16	T	1.95	
Gackle	James			.46	.15				.08	T				.04				.05	.47	.24	T	.04				.60		.18	.62				T	2.93
Garrison 3	Missouri			.35			.02	T										.92	.39	.57	.04	.05				.62					.08	.04	.06	2.05
Granville	Mouse				.04													.92	.39	.57	.04	.05				.62					.08	.04	.06	2.70
Hansboro	Devils Lake	.15	.19		T			.26	.46				.45					.06	.09	.10					1.25	.05			.02		2.06		4.68	
Linton	Missouri				T			.26	.46				.27	.10				.02	.28							.13		.55	T		.03	.07	2.17	
Maddock	Sheyenne	.17	T	T		.06		.45					.08					.24	.99		.03					.29	.11				1.14		3.56	
Mandan 2	Missouri			.70	T	T		.71	.16									.56	T							.05		.23	.13		.10		2.64	
Max 2	do				T	.52		.09										.53	.25	1.17												3.25		
McClusky	do					.33		.26	.01									.22	.60							.10	.38				.26		2.27	
Minot 3	Mouse		T		.17	.02		.15		T								.44	.02	.32	T	T				.70					.14	T	1.02	3.83
Mohall	do	.02	.01		.02			.15		T																								

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LI BISMARCK, N. D., AUGUST 1942 No. 8

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The temperature was slightly below normal, but precipitation was somewhat above average. Temperatures of 100° or higher occurred only on the 20th and not at all in the eastern division. Readings were only slightly above freezing on the 23d and a few stations reported light frost. The precipitation was heavy in the eastern division and moderate in the central and western divisions. Basements were flooded and some crop damage resulted from the excessive precipitation at Ellendale on the 26th. The precipitation was well distributed throughout the month but the greatest amounts occurred at the beginning and near the close of the month. Crops were mostly very good and moisture was plentiful but the wet weather interfered with harvesting and threshing and some lodging and hail damage occurred.

TEMPERATURE

The mean temperature for the state was 66.3°, or 0.2° below the 1892-1942 average for August. The mean temperature for the eastern division was 66.6°; for the middle division, 65.8°; and for the western division, 66.4°. The highest mean temperature was 69.4° at 3 stations in the eastern division, and the lowest, 62.6° at Hannah, making a range in mean temperature of 6.8°. The absolute range was 72°, from 105° at Hettinger on the 20th, to 33° at Gola and Parshall on the 23d. The average daily excess in temperature for the state since January 1, 1942, is 2.1°.

PRECIPITATION

The average precipitation for the state was 3.09 inches, or 1.05 inches more than the 1892-1942 average for August. In the eastern division the average amount was 4.69 inches; in the middle division, 2.48 inches; and in the western division, 2.10 inches. The greatest monthly amount reported was 8.48 inches at Cavalier; the least was 1.10 inches at Mott. The greatest amount recorded in any 24 consecutive hours was 4.43 inches at Ellendale on the 26th. The accumulated excess in precipitation for the state since January 1, 1942, is 2.52 inches.

ERRATA

JULY 1942—
p. 26: Bismarck Airport, mean temperature and departure should be 68.6°; -1.2°. Tuttle, total precipitation should be 2.42 inches.
p. 27: Bismarck, maximum temperature on the 12th should be 87°; mean of the maximum should be 80.5°. Watford City, total precipitation should be 2.22 inches.
p. 28: Ashley, precipitation on the 31st should be 0.01 inch.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Auroras							1										2	1													
Dust storms																															
Fogs	1			1	7	4	6	4	3	19	2		1	5	1	4	2			1											
Lunar halos																															
Solar halos																															
Hail	2			1																											
Thunderstorms	4			5	3	5	1	6	5	1	5	7	1	1						1	1			1	4	6	7	5	9	6	5

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck	29.91	30.31	23	29.52	20	9.4	34	nw.	14	87	55	52	67
Devils Lake.....	29.90	30.29	23	29.51	20	7.6	27	e.	29	96	61	66	60
Fargo	29.90	30.31	23	29.57	21	12.2	49	w.	4	89	57	60	57
Williston	29.91	30.30	22	29.50	28	6.3	24	se.	27	87	50	43	68

† And other dates.

COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	67.3	105	24	2.86	2.80	1.50	2.39	0	8	15	10	6	
1893...	66.7	109	29	2.10	1.25	0.58	1.31	0	3	20	7	4	
1894...	68.8	102	30	1.37	0.86	1.20	1.14	0	4	17	10	4	
1895...	64.5	104	24	1.87	1.36	1.48	1.57	0	5	17	11	3	
1896...	64.7	107	21	2.07	0.86	0.42	1.12	0	5	17	10	4	
1897...	64.1	106	29	1.28	1.13	1.13	1.18	0	5	15	10	5	
1898...	65.4	104	24	2.92	1.40	0.75	1.69	0	5	15	11	5	
1899...	65.2	97	32	2.90	2.90	2.69	2.83	0	6	15	11	5	
1900...	70.4	114	33	6.05	4.53	4.60	5.06	0	10	14	11	6	
1901...	66.9	100	32	2.55	1.90	0.86	1.77	0	6	18	8	5	
1902...	64.3	96	26	2.05	2.36	1.88	2.30	0	8	16	9	6	
1903...	63.7	103	35	4.72	4.65	4.67	4.68	0	10	13	7	11	
1904...	63.3	102	31	1.56	1.92	1.34	1.61	0	6	17	7	7	
1905...	67.5	107	34	3.51	2.44	1.34	2.43	0	7	17	8	6	
1906...	66.3	105	31	1.53	1.74	2.25	1.84	0	7	17	6	8	
1907...	64.5	104	26	2.17	1.23	1.79	1.73	0	6	18	9	4	
1908...	63.2	104	25	2.48	2.46	1.55	2.16	0	7	17	8	6	
1909...	69.8	109	27	2.98	1.94	1.78	2.23	0	6	18	9	4	
1910...	63.1	109	24	1.58	1.30	1.51	1.46	0	5	14	8	9	
1911...	62.2	98	23	3.61	3.87	2.15	3.21	0	8	12	11	8	
1912...	63.4	118	32	3.41	2.60	2.62	2.88	0	10	11	10	10	
1913...	68.9	106	30	3.15	2.32	2.42	2.63	0	6	16	10	5	
1914...	64.2	101	26	2.00	2.26	2.61	2.29	0	7	13	11	7	
1915...	64.4	100	19	1.16	1.49	0.89	1.18	0	4	19	8	4	
1916...	66.0	100	26	3.17	2.79	2.05	2.67	0	8	16	10	5	
1917...	65.2	105	25	0.96	0.74	0.76	0.82	0	4	17	10	4	
1918...	66.5	102	34	3.51	3.39	3.25	3.38	0	8	15	11	5	
1919...	67.9	101	30	2.58	1.57	0.63	1.59	0	5	18	10	3	
1920...	68.8	108	28	1.03	2.01	1.55	1.53	0	5	22	6	3	
1921...	67.2	108	31	3.08	1.86	0.99	1.98	0	6	18	10	3	
1922...	69.8	115	33	1.29	1.63	1.02	1.31	0	6	18	9	4	
1923...	63.0	97	28	2.38	1.70	1.45	1.84	0	8	14	12	5	
1924...	63.8	102	28	2.27	1.36	1.09	1.57	0	6	17	9	5	
1925...	67.9	110	29	1.39	1.06	0.66	1.04	0	5	20	8	3	
1926...	65.6	105	36	3.01	2.41	1.68	2.37	0	7	14	8	9	
1927...	63.4	96	28	3.17	3.63	2.58	3.13	0	8	18	8	5	
1928...	64.8	105	25	3.84	3.15	2.28	3.09	0	8	17	9	5	
1929...	68.5	106	26	0.87	0.83	0.60	0.77	0	4	20	9	2	
1930...	70.4	104	32	1.40	1.45	1.49	1.45	0	6	15	9	7	
1931...	67.0	105	30	2.43	2.33	1.51	2.09	0	6	16	9	6	
1932...	68.3	100	28	2.40	1.37	1.89	1.89	0	7	16	10	5	
1933...	68.5	104	31	0.81	0.64	0.79	0.75	0	5	17	9	5	
1934...	67.4	108	25	1.70	1.15	0.60	1.15	0	5	16	11	4	
1935...	66.2	109	26	3.83	1.90	1.32	2.35	0	8	16	9	6	
1936...	69.8	110	29	1.67	1.37	1.16	1.40	0	6	14	11	6	
1937...	72.9	109	40	2.56	1.11	0.88	1.52	0	5	18	10	3	
1938...	69.8	109	33	1.79	1.22	1.48	1.50	0	6	18	10	3	
1939...	68.6	105	32	1.94	2.37	1.98	2.10	0	7	18	9	4	
1940...	67.8	103	33	3.12	1.77	1.25	2.05	0	7	18	7	6	
1941...	68.8	111	32	3.44	2.63	2.52	2.86	0	10	11	14	6	
1942...	66.3	105	33	4.69	2.48	2.10	3.09	0	9	12	12	7	
Period	66.5	118	19	2.49	1.99	1.64	2.04	0	6	16	9	6	

Climatological Data for August 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	46	69.0	+1.9	95	20	38	23	5.54	+2.95	1.36	29	0	7	9	13	9	nw.	Robert Beard.
Cavalier	Pembina	894	32	66.2	.....	95	20	38	23	8.48	+6.12	2.45	5	0	11	11	11	9	n.	City Light & Power Co.
Colgate	Steele	1,180	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. L. Haugen.
Cooperstown	Griggs	1,428	45	64.6	-2.8	93	20	37	23	2.52	-0.11	0.90	5	0	10	18	7	6	nw.	Theo. Marquardt.
Courtenay	Stutsman	1,523	12	.....	.....	.....	.....	.....	.....	2.12	+0.15	1.17	29-30	0	7	10	12	9	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	65.2	+0.4	94	20	42	23	3.36	+0.88	2.46	29-30	0	13	7	9	15	nw.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	67.8	+0.1	92	20	35	23	4.71	+2.24	1.22	25-26	0	7	7	23	1	se.	O. A. Thompson.
Edmore	Ramsey	1,524	18	63.9	-0.9	93	20	34	23	4.84	+2.54	1.47	29-30	0	8	20	8	3	ne.	Mike Davis.
Ellendale	Dickey	1,457	47	67.6	-1.1	91	20	39	23	7.95	+5.23	4.43	26	0	11	12	8	11	nw.	J. E. Demmer.
Fargo	Cass	895	15	68.4	+2.3	94	20	38	23	6.71	+3.82	3.55	29-30	0	12	7	13	11	nw.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	69.4	+1.2	91	20	41	23	5.17	+2.39	2.60	26	0	8	19	6	6	nw.	Helge Dyste.
Fullerton	Dickey	1,439	44	67.1	-0.9	90	20	39	23	4.30	+1.77	1.38	25-26	0	10	9	16	6	nw.	F. O. Alin.
Grafton	Walsh	827	50	67.2	+1.0	96	20	37	23	4.39	+1.81	1.66	4	0	9	12	12	7	nw.	Dr. J. C. Lamont.
Grand Forks II.	Grand Forks	831	51	66.6	+0.6	95	20	35	23	4.67	+2.03	1.55	29-30	0	15	10	13	8	nw.	U. S. Weather Bureau.
Grand Forks Airport.	Grand Forks	832	2	65.6	.....	95	20	35	23	3.91	.....	1.43	29-30	0	16	13	10	8	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	68.8	-1.9	94	21	42	24	2.23	-0.03	0.77	4-5	0	11	3	20	8	se.	Joseph Rindt.
Hannah	Cavalier	1,568	50	62.6	-1.5	90	20	35	23	4.45	+2.33	0.90	26-27	0	9	5	19	7	nw.	A. E. Prior.
Hillsboro	Trall	901	42	68.0	-0.2	96	20	38	23	5.44	+2.74	2.25	27	0	9	5	16	10	ne.	Alfred Jahnke.
Jamestown	Stutsman	1,457	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. G. Calvelage.
Jamestown Airport	Stutsman	1,494	2	65.9	.....	94	20	39	23	5.24	.....	2.88	29-30	0	8	11	10	10	w.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	65.5	.....	91	20	40	23	4.76	.....	1.68	7-8	0	12	9	14	8	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	63.8	+0.1	92	20	34	23	4.69	+2.23	2.14	1	0	13	14	11	6	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	66.4	+0.5	95	20	35	23	4.18	+1.40	1.91	29-30	0	11	6	7	18	ne.	W. L. Goodison.
Lisbon	Ransom	1,091	38	67.8	0.0	95	20†	39	23	4.86	+2.18	1.72	26	0	10	16	5	10	nw.	J. O. Halverson.
Mayville	Trall	975	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	63.6	-2.1	93	20	34	23	3.93	+1.45	2.39	29-30	0	9	8	16	7	nw.	C. F. Blasky.
McLeod	Ransom	1,075	31	68.6	+0.1	94	21	40	23	5.15	+2.73	2.09	26	0	11	13	11	7	sw.	J. G. Carlson.
McVillie	Nelson	1,467	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Kabeary.
Milnor	Sargent	1,117	3	69.4	.....	94	20	40	23	3.44	.....	1.36	25	0	5	28	3	0	ne.	E. W. Wilson.
Oakes	Dickey	1,318	13	66.6	-2.5	94	20	40	23	4.61	+2.14	2.04	25-26	0	12	16	4	11	nw.	F. H. Murray.
Park River	Walsh	998	38	65.1	-1.5	93	20	35	23	2.82	+0.40	1.41	28-29	0	5	23	5	3	nw.	E. J. Taintor.
Pembina Airport	Pembina	803	68	65.3	+0.6	95	20	38	23	5.89	+3.70	2.05	29-30	0	15	10	11	10	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12	.....	.....	.....	.....	.....	.....	3.76	+1.31	2.24	29-30	0	11	15	7	9	nw.	T. M. Rykken.
Sharon	Steele	1,516	18	66.0	-1.9	93	20	37	23	2.24	-0.20	1.09	29-30	0	13	7	16	8	nw.	Nels O. Greifshelm.
Valley City	Barnes	1,245	36	68.0	+0.3	93	20	40	23	7.37	+5.16	4.30	30	0	9	8	15	8	nw.	I. C. Robertson.
Wahpeton	Richland	962	50	69.4	+0.7	91	19	37	23	6.17	+3.49	1.70	1	0	14	14	10	7	se.	W. J. Cavanaugh.
Average for Eastern Division				66.6	-0.4	96	20	34	23	4.69	+2.20	4.43	26	0	10	12	11	8	nw.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	65.6	-1.6	94	20	34	23	4.90	+2.35	2.15	25-26	0	11	7	11	13	ne.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	28	.....	.....	.....	.....	.....	.....	4.05	+2.14	1.20	1	0	13	13	17	1	se.	Lester H. Bowers.
Bisbee	Towner	1,601	39	66.4	+0.7	99	20	35	23	2.88	+0.41	1.20	1	0	9	14	10	7	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	67.6	+0.3	98	20	38	23	1.48	-0.34	0.53	29	0	11	.....	.....	.....	.....	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	68	67.9	+1.2	99	20	38	23	1.17	-0.65	0.42	29	0	10	15	7	9	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	64.5	-0.4	98	20	40	2	4.18	+1.77	1.89	1	0	9	17	8	6	se.	N. D. School of Forestry
Carrington	Foster	1,579	44	64.8	-2.3	94	20	42	23	3.12	+0.96	1.25	29-30	0	11	13	14	4	w.	Soo Line Agent.
Carson	Grant	2,500	30	67.6	-1.0	101	20	38	23	2.09	+0.29	1.03	25	0	8	16	11	4	nw.	J. W. Evans.
Center	Oliver	4	66.8	.....	.....	97	20	34	23	1.75	.....	0.51	29	0	10	8	19	4	nw.	Fred L. Heinz.
Dogden Butte II.	McLean	1,880	16	65.6	-1.6	97	20	39	23	5.12	+3.19	3.10	26	0	11	12	11	8	nw.	R. L. Williams.
Drake	McHenry	1,634	13	65.4	-2.2	98	20	42	2	1.93	+0.31	0.77	29-30	0	9	16	6	9	s.	H. G. Kringen.
Dunseith	Rolette	1,682	46	63.6	-1.0	93	20	38	15	2.09	-0.37	0.83	4	0	9	9	16	6	nw.	Geo. Gehres.
Eckman	Bottineau	1,500	37	65.4	+0.2	102	20	37	23	1.12	-0.85	0.32	26	0	9	10	14	7	nw.	R. F. Nowak.
Energy II.	McLean	1,750	27	65.9	-2.4	100	20	36	23	2.88	+0.95	0.95	29	0	9	11	17	3	n.	H. S. Solenberger.
Fessenden	Wells	1,610	30	65.8	-0.9	96	20	41	23	2.71	+0.40	1.16	4	0	10	13	12	6	w.	John V. Zuber.
Fort Yates	Sioux	1,670	42	68.7	-1.0	102	20	36	23	1.24	-0.93	0.66	26	0	3	23	6	2	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	66.6	0.0	101	20	42	23	2.05	-0.06	0.81	13-14	0	12	4	16	11	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	67.4	.....	92	20	39	23	4.78	+2.51	3.01	29-30	0	8	8	13	10	n.	A. H. Haut.
Garrison	McLean	1,925	65	65.5	-1.1	100	20	37	23	2.64	+0.63	0.87	4	0	11	14	11	6	nw.	E. L. Vorachek.
Granville	McHenry	1,504	35	68.2	+2.5	100	20	42	2†	2.04	+0.14	0.44	29-30	0	14	15	10	6	se.	Fred Roble.
Hansboro	Towner	1,597	34	63.2	-0.3	94	20	38	23	2.91	+0.61	1.11	1	0	10	13	12	6	nw.	W. E. Disher.
Harvey	Wells	1,596	39	.....	.....	.....	.....	.....	.....	2.18	-0.16	1.18	29-30	0	5	0	17	14	nw.	Orville Hoksche.
Leeds	Benson	1,515	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Carl T. Carlson.
Linton	Emmons	1,711	25	68.6	-1.5	100	20	35	23	2.41	+0.04	2.00	25-26	0	5	13	11	7	nw.	Wm. Heyerman.
Maddock	Benson	1,604	27	66.2	.....	97	20	43	23	1.72	.....	0.82	29-30	0	8	6	18	7	nw.	A. T. Felland.
Mandan	Morton	1,750	28	67.4	-1.5	100	20	38	23	1.50	-0.22	0.46	1	0	7	10	2	19	nw.	No. Gt. Plains Field Sta.
Max	McLean	2,093	13	65.3	-2.1	99	20	36	23	3.21	+1.50	1.32								

Climatological Data for August 1942																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha	Golden Valley	2,908	15	67.4	-1.0	100	20	38	23	1.74	+0.03	0.48	13	0	8	20	5	6	nw.	H. A. Bury.
Amidon	Slope	2,908	19	67.4	-1.0	100	20	38	23	1.98	+0.61	0.52	26	0	11	11	13	7	nw.	Stanley W. Bale.
Beach	Golden Valley	2,759	36	67.4	+0.2	96	20	38	23	2.10	+0.41	1.14	5-6	0	6	9	18	4	se.	J. C. Russell.
Berthold Agency	McLean	2,082	48	67.2	-0.6	100	20	34	23	1.75	-0.17	1.03	4	0	11	15	11	5	nw.	H. W. Case.
Bowbells	Burke	1,958	13	63.0	-1.2	94	11	37	21	3.23	+1.22	1.30	13-14	0	10	9	7	15	s.	Charles Kaufman.
Bowman	Bowman	2,872	27	66.6	-1.5	100	20	44	15	1.54	-0.26	0.56	13	0	7	9	6	16	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	33	64.1	-0.9	99	20	38	23	2.86	+0.87	0.90	14	0	9	9	10	12	nw.	J. H. Phelps.
Dickinson	Stark	2,543	49	65.7	-0.8	98	20	34	23	2.52	+0.53	0.65	30	0	12	18	10	3	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,583	2	66.2	.....	99	20	38	23	1.78	.....	0.87	29	0	6	10	19	2	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	65.0	-1.4	100	20	34	23	2.27	+0.56	0.64	27	0	9	12	14	5	nw.	O. T. Evenson.
Epping	Williams	2,224	31	66.2	-1.3	101	20	38	21	2.68	+0.98	0.81	29-30	0	7	18	11	2	nw.	T. Beachler.
Fairfield	Billings	.....	5	.....	.....	.....	.....	.....	.....	1.26	+0.23	0.45	26-27	0	7	14	13	4	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	66.3	.....	96	20	37	23	2.17	+0.21	0.39	31	0	11	12	15	4	nw.	Verne King.
Golva	Golden Valley	2,780	2	66.6	.....	100	20	33	23	1.24	.....	0.50	26	0	5	12	16	3	e.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	2	.....	.....	.....	.....	.....	.....	3.33	.....	0.64	7+	0	12	12	13	6	e.	Peavy Elevator Co.
Hanks	Williams	2,114	34	.....	.....	102	20	35	23	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	H. W. Bublitz.
Hettinger	Adams	2,675	34	69.2	+0.3	105	20	37	23	1.34	-0.29	0.86	24	0	5	13	15	3	nw.	J. A. Springer.
Kenmare	Ward	1,799	10	65.8	+0.3	99	20	40	23	2.12	+0.18	0.78	14	0	7	10	7	14	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	68.1	-0.1	98	20	35	23	2.37	+0.63	0.69	26	0	11	11	9	11	nw.	S. P. Grane.
Mary	McKenzie	.....	13	.....	.....	.....	.....	.....	.....	1.30	-0.10	0.53	27	0	7	20	7	4	nw.	Fred Hartman.
Medora	Billings	2,271	26	.....	.....	.....	.....	.....	.....	1.31	-0.34	0.30	9+	0	6	21	9	1	nw.	Ovide E. Grenier.
Mott	Hettinger	2,424	34	69.2	+1.2	102	20	34	23	1.10	-0.83	0.61	26-27	0	7	12	11	8	nw.	P. G. Wick.
New England	Hettinger	2,400	47	69.2	+1.4	102	20	43	31	2.68	+0.98	0.98	29	0	6	7	14	10	ne.	F. S. Sleight.
Parshall	Mountrail	1,929	26	64.2	.....	100	20	33	23	1.50	-0.46	0.48	13	0	10	4	27	0	sw.	C. E. Shubert.
Portal	Burke	1,954	36	64.2	-0.6	98	20	34	2	2.71	+0.82	1.02	29-30	0	12	12	13	6	nw.	A. J. Lindsoy.
Powers Lake	Burke	2,205	36	65.4	-0.4	100	20	38	23	3.10	+1.33	1.28	11-12	0	8	14	10	7	sw.	Geo. B. Gee.
Richardton	Stark	2,467	25	67.5	-1.0	99	20	44	23	2.13	+0.18	0.58	1	0	10	10	15	6	nw.	Assumption Abbey.
Sanish	Mountrail	1,835	16	65.6	-2.0	100	20	36	23	2.46	+0.92	0.49	12	0	10	5	25	1	.....	H. J. Bugge.
Stanley	Mountrail	2,258	4	64.3	.....	100	20	35	23	1.72	.....	0.40	24	0	7	9	14	8	nw.	Leroy Edwards.
Tioga	Williams	2,279	13	.....	.....	.....	.....	.....	.....	2.08	+0.77	0.72	13-14	0	7	13	14	4	se.	B. V. Olson.
Trotters	Golden Valley	.....	16	.....	.....	.....	.....	.....	.....	2.84	+1.33	1.06	29	0	8	4	22	5	sw.	Walter Grunewald
Van Hook	Mountrail	1,864	2	68.2	.....	100	20	35	23	2.66	.....	0.50	27	0	11	10	18	3	nw.	Soil Conservation Serv.
Watford City	McKenzie	2,084	28	68.0	-0.3	100	20	37	23	2.89	+1.18	0.60	27	0	9	12	17	2	nw.	J. C. Zeller.
Wildrose	Williams	2,258	14	.....	.....	.....	.....	.....	.....	2.38	+0.74	0.68	14	0	8	13	8	10	sw.	L. Holter.
Williston	Williams	1,878	62	66.9	+0.8	101	20	39	23	1.79	+0.32	0.61	27	0	9	14	12	5	se.	U. S. Weather Bureau.
Average for Western Division				66.4	-0.6	105	20	33	23	2.10	+0.46	1.14	5-6	0	9	12	13	6	nw.	.....
Average for the State				66.3	-0.2	105	20	33	23	3.09	+1.05	4.43	26	0	9	12	12	7	nw.	.....

Daily Temperatures for August 1942																																						
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean					
Ashley ³	Maximum...	81	72	81	81	78	79	77	79	82	75	85	85	73	66	72	76	79	84	87	94	85	65	68	81	88	76	74	86	77	70	65	78.					
	Minimum...	56	49	49	58	53	52	51	60	58	56	58	55	52	50	47	47	53	58	58	53	41	34	47	58	50	58	62	60	57	51	53.						
Beach	Maximum...	81	75	82	88	83	75	83	87	82	81	95	91	76	68	75	86	86	91	92	96	88	66	75	93	85	85	82	84	70	70	65	81.					
	Minimum...	52	45	53	57	54	54	50	55	53	55	60	59	53	47	45	50	55	57	66	55	48	38	52	56	54	59	59	43	55	47	52.						
Bismarck Airport ¹	Maximum...	82	76	82	85	81	78	82	85	85	77	90	81	76	70	75	79	85	89	91	99	85	67	71	84	81	83	84	86	74	65	69	80.					
	Minimum...	57	48	50	60	56	56	53	52	62	63	56	63	57	57	49	49	50	54	59	63	55	47	38	52	65	62	62	63	52	58	47	55.					
Bottineau	Maximum...	75	71	80	77	80	82	80	85	80	82	86	85	68	62	70	75	72	81	82	98	74	62	68	76	81	67	76	80	79	72	66	76.					
	Minimum...	54	40	50	55	47	60	58	55	55	50	55	50	60	54	42	46	52	54	55	60	48	46	46	56	61	55	61	47	49	47	52.						
Carson	Maximum...	82	76	81	88	82	82	84	87	87	83	92	82	71	72	77	81	87	90	94	101	88	68	73	85	87	84	82	83	72	70	63	81.					
	Minimum...	54	44	51	58	55	54	52	53	53	59	59	63	53	42	47	51	55	54	62	55	47	38	52	59	59	58	64	50	54	46	53.						
Crosby	Maximum...	68	74	85	85	78	79	85	84	79	82	84	79	82	71	81	83	92	88	99	68	62	73	88	78	72	82	76	77	70	63	78.						
	Minimum...	53	39	45	45	51	50	48	49	55	50	56	56	55	48	46	50	50	55	55	59	48	38	43	52	51	54	55	44	44	57	49.						
Devils Lake ¹	Maximum...	77	70	77	77	77	80	79	82	80	76	85	83	72	63	69	73	76	84	83	94	78	62	65	76	84	76	79	84	76	64	68	76.					
	Minimum...	54	46	51	54	56	58	60	58	61	58	54	63	57	52	47	49	50	54	58	58	51	49	42	44	59	61	54	62	52	54	48	54.					
Dickinson Airport ³	Maximum...	79	73	78	82	81	82	80	83	81	77	91	87	66	68	74	80	85	90	99	83	65	73	89	85	81	82	75	65	65	63	79.						
	Minimum...	54	45	49	57	56	55	51	55	54	59	59	62	53	50	47	50	52	56	56	64	50	44	38	51	59	56	58	62	48	53	46	53.					
Dunn Center	Maximum...	79	75	83	81	79	80	84	87	82	75	93	87	68	68	76	80	88	90	100	81	66	75	90	82	81	82	79	64	65	66	79.						
	Minimum...	51	42	44	45	54	51	49	50	52	58	54	54	53	54	46	48	48	56	58	56	49	34	40	47	57	57	61	45	48	43	50.						
Fargo ¹	Maximum...	84	75	83	84	79	80	74	80	83	80	86	89	75	72	73	77	80	82	89	94	85	67	75	89	72	80	86	87	84	66	79.						
	Minimum...	65	52	48	53	60	58	64	59	59	60	60	68	58	55	54	48	51	52	61	55	58	47	38	45	63	65	62	62	65	62	58.						
Fessenden	Maximum...	80	71	78	77	78	77	77	85	81	80	86	86	83	70	66	72	78	85	85	96	94	72	72	80	86	81	80	86	83	60	66	79.					
	Minimum...	55	43	48	52	53	53	56	53	57	57	52	61	58	54	46	47	49	54	55	55	47	47	41	44	57	59	56	62	46	54	44	52.					
Fullerton	Maximum...	80	73	81	82	77	79	77	79	82	76	84	84	74	68	72	75	76	80	87	90	86	66	67	78	87	72	73	86	82	80	64	78.					
	Minimum...	60	52	51	58	56	55	57	55	60	59	57	61	60	55	52	51	52	53	60	57	65	49	39	45	60	63	59	62	64	62	53	56.					
Garrison ³	Maximum...	80	76	82	78	79	79	82	86	83	78	91	83	70	64	73	79	84	90	89	100	78	66	71	83	87	82	84	75	63	64	79.						
	Minimum...	52	41	43	56	52	55	54	54	56	56	54	49	56	53	47	46	50	54	58	60	51	46	37	47	60	59	60	54	45	50	45.						
Grafton	Maximum...	78	76	77	80	79	78	82	82	77	84	84	83	73	73	75	77	83	84	96	94	76	76	66	74	80	79	79	78	79	79	71	79.					
	Minimum...	61	50	52	51	62	59	60	55	60	58	54	63	54	52	44	53	54	58	56	61	52	37	40	60	61	58	60	55	59	51	55.						
Grand Forks Airport ³	Maximum...	80	72	76	83	76	75	75	82	82	77	85	86	75	71	71	75	77	83	81	95	82	64	66	75	75	70	80	83	78	71	72	77.					
	Minimum...	56	49	49	49	60	58	60	55	57	57	57	64	57	55	50	44	50	53	57	54	55	40	35	40	60	62	59	61	57	60	50	53.					
Jamestown Airport ³	Maximum...	81	72	81	79	79	81	79	83	85	75	85	85	74	68	71	74	77	86	85	94	84	64	68	78	89	78	79	85	79	70	71	78.					
	Minimum...	57	47	46	55	51	53	56	53	59	57	53	62	55	56	49	47	50	51	58	53	51	49	39	45	57	60	55	64	57	55	47	53.					
Kenmare	Maximum...	72	76	83	79	82	78	86	89	80	77	94	89	66	65	72	81	78	90	88	99	70	65	70	86	82	70	82	81	74	69	67	78.					
	Minimum...	55	42	50	54	52	53	55	56	56	55	55	60	58	55	49	53	54	59	59	60	50	40	49	49	55	58	60	44	45	48	52.						
Langdon	Maximum...	77	74	77	78	77	80	78	86	80	75	80	79	82	71	71	72	74	81	82	92	88	68	64	73	82	68	75	75	77	61	67	76.					
	Minimum...	49	43	46	50	58	62	57	58	56	54	50	61	60	49	42	41	46	53	54	52	56	49	34	43	56	54	55	59	47	53	45	51.					
Marmarth	Maximum...	82	74	82	86	83	80	82	87	83	85	94	89	84	70	75	81	86	92	92	98	86	68	76	86	94	82	85	82	78	65	60	82.					
	Minimum...	52	50	57	60	57	58	50	51	52	51	52	58	50	55	45	44	57	50	55	68	60	58	35	60	60	55	60	61	48	51	71	54.					
Minot ³	Maximum...	75	73	80	74	78	79	83	86	82	77	92	89	73	62	73	79	80	90	86	100	75	63	71	83	84	72	83	85	71	67	64	78.					
	Minimum...	50	40	44	52	50	55	52	52	57	53	52	65	54	52	45	47	51	54	58	62	49	45	39	49	60	60	49	41	46	40	51.						
Mott	Maximum...	83	78	83	88	86	87	87	88	85	82	94	83	76	71	72	84	89	92	94	102	88	65	62	44	34	51	62	55	59	64	44	56.					
	Minimum...	62	53	53	67	55	70	72	54	56	58	64	63	56	54	47	42	47	61	64	65	62	44	34	51	62	55	59	64	50	49	44	56.					
Pembina Airport ³	Maximum...	77	72	75	82	78	76	79	86	80	79	82	84	78	71	69	75	81	81	83	95	80	60	66	75	82	70	82	75	78	62	69	76.					
	Minimum...	56	49	51	49	61	57	59	57	59	56	53	64	62	53	49	43	51	55	58	53	56	42	38	42	60	58	58	61	54	55	50	53.					
Sharon	Maximum...	83	74	81	80	79	83	77	83	82	78	84	85	74	67	70	74	77	82	84	93	82	70	65	75	81	79	80	82	80	69	70	78.					
	Minimum...	57	48	46	51	53	56	60	57	57	58	53	62	60	53	50	46	48	54	58	56	61	48	37	44	55	63	57	60	55	58	49	53.					
Steele	Maximum...	78	70	77	70	74	76	77	79	80	74	83	80	78	68	69	72	77	84	84	93	84	64	69	80	83	79	79	84	77	64	69	76.					
	Minimum...	54	45	46	58	51	53	55	51	60	61	54	61	58	52	46	46	49	50	58	55	60	48	36	48	58	60	58	63	51	56	44	53.					
Valley City	Maximum...	81	79	80	81	80	79	75	78	83	80	85	88	83	74	70	75	76	82	85	93	88	80	79	77	87	85	80	86	85	82	73	80.					
	Minimum...	60	50	46	55	54	55	59	57	55	59	57	62	64	53	48	47	48	58	52	65	51	40	44	56	64	58	63	62	65	52	55.						
Wahpeton	Maximum...	83	82	80	82	79	80	78	80	84	77	83	86	73	72	73	75	76	79	91	90	88	84	66	74	87	86	7										

Daily Precipitation for August 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total							
Eastern Division																																								
Casselton	Red.	.61				.75		T.	.18					.17	T.													1.33	T.			1.14	1.36	5.54						
Cooperstown ²	Sheyenne	.07				.90	.03	T.						.20		.02	T.						.05					.65	.02		.93	.24	.28	2.62						
Courtenay	James		.15	.59										.11	.01													.09					3.12							
Devils Lake ¹	Devils Lake			.28				.01	.02					.04	.01	.09						.03	.01		T.	T.		.15	.09	.93	1.54	.16	2.36							
Edgeley	James	.49			.62			.08																			.05	1.17			1.13	1.17	.07	4.71						
Edmore	Devils Lake	.69		.46										.16	.06												.12			.71	1.47		4.84							
Ellendale	James	.65		.90	.73		.02	.44					.18	.09	T.	T.											.43		.01	.07	.43		7.95							
Fargo ¹	Red.	.35		.74		T.	.07	.05						.25	T.	T.						.02	T.				.17	.93	T.	.50	2.71	.84	.08	6.71						
Forman	Sheyenne	.68		.05	.57					T.				.36	.05													2.60			.41	.45	T.	5.17						
Fullerton	James	.51		.14	.64		.28		.03	T.				.16									.03			T.		1.38		.04		1.09		4.30						
Grafton	Red.				1.66									.12	.24	.05	.22											.67		.10		.93	.40	4.39						
Grand Forks Airport ³	do	.02		.96	.02	.05	.05		.03					.17	.23	.05	T.					.07	.01				T.	.22		.55	.05	1.40	.03	3.91						
Hankinson ²	do	.60		.02	.75			.13						.07		.15												.02	.02	.08	.01	.38		2.22						
Hannah	Pembina	.80						T.						T.	.20	.80						.05	T.					T.	.60	.30	.45	.60	.65	T.	4.45					
Hillsboro	Red.			.60	.01	.10				.02				.34	T.													.07		2.25		2.00		5.24						
Jamestown Airport ³	James	.29		1.45		.08								.19	T.							.02						T.	.21		1.52	1.48		4.69						
Langdon	Pembina	2.14		.26										.12	.16	.16	.03											.02	.27	.14	.11	.05	1.11	3.76						
Larimore	Red.	.45		.67	.39		.03	.17						T.	.31	.06													T.			.25	1.66	4.18						
Lisbon	Sheyenne	.46		.02	.81			.06			.06				.01	T.													T.	1.72	.22	.07	1.43		4.86					
Mayville	Red.																																	3.93						
McHenry	James			1.07										.07	.07	.03													.10					5.15						
McLeod	Sheyenne	.99		.16		.01	.03		.03					.09																				4.61						
Oakes	James	.33		.45	.67					.04	.02			.11	.04														.03					2.82						
Park River	Red.			.60						.05				T.	T.														T.	.1	.23	1.18	.76	5.89						
Pembina Airport	do	.54		.51	.49	.04				.12				.24	.07	.16	.03												T.	.08		.81	.45	1.60	13	3.76				
Petersburg	do	.22		.45	.23					.07				.14	.11																		.24		2.24					
Sharon	do	.01		.46	.05					.01				.02	.11	.02																	.06	1.03	3.76					
Valley City	Sheyenne	.36		.03	.69									.09	T.	T.																	.31	4.30	7.37					
Walperton	Red.	1.70		.04	1.04		.02	.09	.17					.01	.13	T.														.05	1.17	.59	.01	1.03	12	6.17				
Middle Division																																								
Ashley ³	Missouri	.32		1.45		T.	.26		.26					.13	.01	.02												T.	T.			.39	1.76	T.	.16	.14	T.	4.90		
Bisbee	Devils Lake	1.20		.09										.15	.15																	.14	.09	.12	.05	2.88				
Bismarck ¹	Missouri	.01		.10			T.	T.	.10	T.				.02	.03																	.01	.37	T.	.42	T.	1.17			
Bottineau ²	Mouse	1.89			.06	.19									.31	.11																.03	1.27		.31	4.18				
Carrington	James	.11		1.21				T.	.05					.03		.02																	.07	1.18	.02	3.12				
Carson	Heart	.32			.05				.06					.13	.10																		.13	.30	.26	.14	2.09			
Center	Missouri			.02	.04		.15							.17	.18	.10																	.28		.51	.15	1.75			
Dogden Butte	Mouse			.53	.44		.12		.04	T.	T.			T.	.23	.18	.03																.31	.10	.51	.10	5.12			
Drake ²	do	.05		.35	.44		.31		.09					T.	.13	.26																	.05		.75	.02	1.93			
Dunseith	do	.11						T.						T.	.13	.27	.17	.05															.04	T.	.34		2.09			
Eckman	do				.03		.10							.16	.25																		.08	.32		.10	1.12			
Energy	Missouri	T.		.20		.60		.16						.12	.13	.45																	.12	.15	.95	T.	2.88			
Fessenden	James	.05		1.16				.05						.02	.04	.07																		.11		.38	.41	2.71		
Fort Yates	Missouri	.27			.31									.08	.12	.18	T.																	.08	.02	.09	T.	1.24		
Foxholm (near)	Mouse	.27			.40		.03	T.						.24	.57																			.08	.02	.01	.02	2.05		
Gackle	James	.13			.79			T.		T.				.08	.12	.18	T.																	.08	.02	.09	T.	4.78		
Garrison ³	Missouri			.87	.15		.03							.11	.35																			.08	.02	.12	.23	2.64		
Granville	Mouse	.18		.10		.23		.30						T.	.13	.27	.27																	.10	.03	.08	.08	2.04		
Hansboro	Devils Lake	1.11		T.										.23	.61																			.02	T.	.01	.35	.14	2.91	
Linton	Missouri	.29		.02										.10																					.02	T.	.01	.35	.14	2.91
Maddock	Sheyenne			.36				.04		.07				.04	.07	T.																			.03	.03	.03	.03	2.41	
Mandan ²	Missouri	.46												.07	.07																				.02	.02	.02	2.41		
Max ²	do			.68						.23				T.	.25	.10																								

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., SEPTEMBER 1942 No. 9

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Warm, sunshiny weather prevailed early in the month, but the temperature was considerably below normal during the last half of the month. The coldest weather ever recorded in September occurred from the 26th to the 28th. Very little precipitation occurred during the first 10 days, but showery weather prevailed from the 11th to the 26th. The heaviest snowfall ever recorded in September occurred on the 25th and 26th. It was heaviest in the central part of the state. Many tree branches and shrubs were broken by the weight of the wet snow. Threshing was seriously delayed by the wet weather, and by the close of the month much grain remained to be threshed. The severe freeze on the 26-28th froze the ground to a depth of 3 inches in a few localities. Gardens were destroyed and considerable corn and late flax were damaged.

TEMPERATURE

The mean temperature for the state was 54.0°, or 2.8° below the 1892-1942 average for September. The mean temperature for the eastern division was 53.6°; for the middle division, 54.0°; and for the western division, 54.3°. The highest mean temperature was 57.8° at Fort Yates, and the lowest, 50.4° at Carrington, making a range in mean temperature of 7.4°. The absolute range was 95°, from 99° at Bowbells on the 6th, to 4° at Parshall on the 26th. The average daily excess in temperature for the state since January 1, 1942, is 1.6°.

PRECIPITATION

The average precipitation for the state was 1.67 inches, or 0.11 inch more than the 1892-1942 average for September. In the eastern division the average amount was 1.71 inches; in the middle division, 1.62 inches; and in the western division, 1.67 inches. The greatest monthly amount reported was 4.56 inches at Hankinson; the least was 0.37 inch at Eckman. The greatest amount recorded in any 24 consecutive hours was 1.43 inches at New England on the 17th. The accumulated excess in precipitation for the state since January 1, 1942, is 2.63 inches. The average snowfall was 2.7 inches.

ERRATA

- AUGUST 1942—
p. 30: Eckman, temperature departure should be +0.4°.
p. 31: Berthold Agency, mean temperature should be 67.3°.
Crosby, minimum temperature on the 31st should be 47°.
Marmarth, minimum temperature on the 30th should be 55°, and on the 31st, 51°.
p. 32: Max. precipitation on the 31st should be .33 inch.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	21	10	3	1	2	5	15	9	4	2	...	...	5	26	1	3	9	1	1	...	1	3	...	1	4	...	...	...	...	12	...
Lunar halos .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Solar halos .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sleet .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thunderstorms	5	...	...	...	2	8	...	...	14	8	...	...	8	12	16	7	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	Percentage of sunshine
Bismarck.....	30.00	30.41	27	29.54	15	10.1	34	nw.	21	87	58	55	58
Devils Lake.....	29.98	30.42	2	29.51	15	8.1	28	se.	10	93	56	62	57
Fargo.....	30.00	30.40	28	29.56	16	11.9	46	nw.	23	90	61	65	54
Williston.....	29.98	30.42	2	29.53	15	6.5	31	nw.	10	84	53	50	55

† And other dates.

COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	59.2	101	24	1.08	1.05	0.40	0.84	0	4	16	7	7
1893...	57.1	102	8	0.75	0.75	0.94	0.81	0.1	4	18	7	5
1894...	58.2	104	18	1.06	1.67	1.42	1.38	0	5	15	7	8
1895...	56.6	100	12	1.29	0.61	0.42	0.77	0	4	12	12	6
1896...	53.0	98	11	2.25	2.00	0.57	1.61	0	6	12	8	10
1897...	64.1	109	18	0.24	0.25	0.35	0.28	0	2	20	7	3
1898...	56.8	98	10	1.85	1.00	0.90	1.25	0	4	14	9	7
1899...	55.0	101	11	0.60	0.57	0.57	0.58	T.	3	17	9	4
1900...	54.6	98	17	5.15	5.26	4.44	4.95	T.	8	12	7	11
1901...	53.6	100	12	2.41	1.80	1.82	2.01	T.	7	10	8	12
1902...	53.6	95	15	1.24	0.54	0.44	0.74	0	4	16	8	6
1903...	51.6	90	18	3.36	2.85	2.77	2.99	0.7	7	12	6	12
1904...	54.7	96	18	2.12	1.18	1.00	1.43	0	5	14	7	9
1905...	59.8	104	23	1.62	1.65	1.74	1.67	0	5	16	8	6
1906...	62.8	109	20	1.54	0.73	1.07	1.11	0	4	19	6	5
1907...	52.1	96	9	2.39	1.11	0.68	1.39	T.	6	14	8	8
1908...	60.7	104	16	0.87	0.89	1.97	1.24	0.2	4	17	7	6
1909...	59.0	93	24	1.03	0.77	1.04	0.95	0	4	16	8	6
1910...	55.3	99	18	2.38	1.88	1.10	1.79	0.1	4	14	7	9
1911...	54.9	95	21	2.32	2.41	2.38	2.37	T.	8	12	8	10
1912...	51.5	101	18	3.54	2.50	1.82	2.62	0	10	11	6	13
1913...	57.2	108	8	2.39	1.47	1.37	1.74	0.4	6	16	8	6
1914...	59.3	98	25	1.24	1.00	0.84	1.03	0	5	16	8	6
1915...	54.6	104	23	2.42	2.60	1.94	2.32	0	9	10	8	12
1916...	55.1	99	15	2.12	1.07	1.10	1.43	T.	6	14	9	7
1917...	56.4	97	16	1.53	0.93	0.65	1.04	0	5	12	9	9
1918...	51.9	93	11	0.46	0.40	0.33	0.40	T.	3	15	9	6
1919...	58.6	100	20	0.92	1.05	0.86	0.94	0.3	5	12	10	8
1920...	59.0	99	19	3.94	1.19	1.49	2.21	T.	8	15	9	6
1921...	57.0	101	25	3.91	3.37	2.34	3.21	T.	12	12	10	8
1922...	59.8	104	23	2.42	2.00	1.89	2.10	0	6	16	8	6
1923...	60.1	99	15	2.04	2.25	3.25	2.51	0	6	14	8	8
1924...	55.0	98	20	3.68	1.91	0.68	2.09	T.	7	15	7	8
1925...	58.1	103	20	4.18	2.23	1.61	2.67	T.	8	12	8	10
1926...	52.3	95	9	2.80	2.44	1.66	2.30	0.5	9	11	9	10
1927...	56.8	101	10	1.06	0.47	1.48	1.00	T.	3	16	9	5
1928...	53.9	95	12	1.50	0.75	0.74	1.00	T.	5	17	7	6
1929...	52.7	105	12	1.65	1.82	1.47	1.65	0	5	11	9	10
1930...	56.2	98	10	1.02	0.88	1.17	1.02	0	4	16	9	5
1931...	61.4	107	27	1.97	2.38	2.06	2.14	T.	6	18	7	5
1932...	56.8	102	22	1.10	0.56	0.23	0.63	0	3	18	8	4
1933...	60.9	101	22	1.03	0.71	0.70	0.81	0	4	16	8	6
1934...	52.4	95	9	1.28	0.86	0.74	0.96	2.0	7	11	9	10
1935...	57.2	105	16	0.73	0.44	0.12	0.43	0	3	15	9	6
1936...	60.3	102	12	1.47	1.29	0.68	1.15	T.	5	15	10	5
1937...	58.6	104	20	1.21	1.60	1.61	1.47	0.1	6	13	9	8
1938...	61.9	99	21	0.95	0.34	0.61	0.63	0	4	17	7	6
1939...	58.9	98	11	1.12	0.47	0.45	0.68	0.2	5	15	8	7
1940...	62.8	103	20	0.87	0.98	1.32	1.06	0	4	17	9	4
1941...	55.3	94	17	5.22	4.71	3.91	4.61	0.2	11	9	10	11
1942...	54.0	99	4	1.71	1.62	1.67	1.67	2.7	9	12	9	9
Period	56.8	109	4	1.90	1.48	1.31	1.56	0.1	6	14	8	8

Climatological Data for September 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	46	55.0	-2.9	87	10	18	28†	1.13	-0.99	0.30	13	1.8	9	13	5	12	s.	C. Hayford.
Cavalier	Pembina	894	32	53.9	.....	86	6†	19	28	0.57	-1.69	0.27	16	0	4	14	7	9	n.	City Light & Power Co.
Colgate	Steele	1,180	9	.....	.....	.....	.....	.....	.....	0.86	.....	0.30	13	1.0	7	17	5	8	s.	M. H. Badger.
Cooperstown	Griggs	1,428	45	51.5	-6.2	86	8	17	26	2.01	+0.19	0.53	18	3.0	10	17	3	10	nw.	Theo. Marquardt.
Courtenay	Stutsman	1,523	12	.....	.....	.....	.....	.....	.....	2.11	+1.13	0.60	17	0.5	8	9	14	7	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	52.7	-3.2	86	8	21	26	1.15	-0.48	0.41	13	T.	10	10	8	12	s.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	54.2	-4.1	89	10	14	26	2.03	+0.24	0.70	26	5.0	10	6	20	4	se.	O. A. Thompson.
Edmore	Ramsey	1,524	18	51.6	-4.8	85	6†	15	28	1.23	-0.57	0.34	16	0	7	16	11	3	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	54.4	-4.4	91	10	19	26†	2.38	+0.62	0.55	25	6.0	12	17	3	10	s.	J. E. Demmer.
Fargo	Cass	895	15	54.2	-4.0	83	6	20	28	1.27	-0.95	0.27	17-18	0.6	11	9	9	12	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	55.0	-4.5	92	10	20	26†	2.06	-0.11	0.64	25	8.0	9	18	7	5	s.	Helge Dyse.
Fullerton	Dickey	1,439	44	54.0	-4.0	87	10	19	26†	2.43	+0.33	0.80	25	5.3	12	14	8	8	s.	F. O. Alin.
Grafton	Walsh	827	50	54.4	-2.6	86	6	18	28	0.66	-1.68	0.19	16	T.	5	11	16	3	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	53.4	-3.5	84	6	18	28	0.79	-1.25	0.15	18	0	10	10	12	8	nw.	University of N. Dak.
Grand Forks Airport	Grand Forks	832	2	53.6	.....	85	6	18	28	0.71	.....	0.16	18	T.	8	9	10	11	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	54.2	-6.3	87	11	21	28	4.56	+2.72	1.31	14	4.0	8	5	9	16	nw.	Joseph Rindt.
Hannah	Cavalier	1,568	50	51.2	-3.6	84	6†	18	27	1.75	-0.45	0.70	16	T.	5	9	9	12	sw.	A. E. Prior.
Hillsboro	Traill	901	42	54.6	-4.4	85	10	19	28	1.41	-0.74	0.33	7	T.	10	9	11	10	s.	Alfred Jahnke.
Jamestown	Stutsman	1,457	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. G. Calvelage.
Jamestown Airport	Stutsman	1,494	2	52.8	.....	88	10	18	26	2.52	.....	1.16	13	2.1	12	9	8	13	se.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	53.6	.....	86	7†	18	26	2.04	.....	0.76	13	1.4	11	15	7	8	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	52.5	-1.0	84	6†	18	26†	0.77	-1.55	0.51	16	0.8	5	15	7	8	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	54.2	-2.2	85	6†	19	28	0.89	-1.37	0.22	18	T.	11	11	7	12	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	53.0	-5.1	92	10	18	28†	1.76	-0.38	0.86	26	2.0	12	16	3	11	nw.	J. O. Halverson.
Mayville	Traill	975	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	51.2	-4.6	85	8	14	28	1.91	+0.40	0.51	13	0.2	13	13	6	11	n.	C. E. Blasky.
McLeod	Ransom	1,075	31	51.2	-5.4	85	1†	19	28	1.72	-0.49	0.39	18	3.7	10	17	4	9	sw.	J. G. Carlson.
McVille	Nelson	1,467	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. Kabeary.
Milnor	Sargent	1,117	3	54.8	.....	90	6†	18	27	2.89	.....	0.87	17	6.0	8	17	11	2	se.	E. W. Wilson.
Oakes	Dickey	1,318	13	53.0	-6.0	92	10	19	28	2.65	+1.35	0.98	26	2.5	11	15	2	13	nw.	F. H. Murray.
Park River	Walsh	995	38	53.3	-3.6	84	7†	21	28†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. J. Taintor.
Pembina	Pembina	7-9	68	53.0	-1.5	86	6	20	26†	0.92	-1.30	0.32	16	T.	5	6	23	1	nw.	S. W. Douglas.
Pembina Airport	Pembina	803	3	52.0	.....	85	6	17	28	0.74	.....	0.29	15	T.	4	8	11	11	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12	.....	.....	.....	.....	.....	.....	1.19	-0.45	0.34	13	T.	8	15	7	8	s.	T. M. Rykken.
Sharon	Steele	1,516	18	52.7	-4.7	84	7†	16	28	1.64	-0.54	0.35	13	1.0	12	11	10	9	s.	Nels O. Grefsheim.
Valley City	Barnes	1,245	36	55.8	-3.0	87	10†	21	26	2.00	+0.12	0.70	14	2.6	9	13	4	13	ne.	I. C. Robertson.
Wahpeton	Richland	962	50	56.0	-4.0	85	10†	22	28	3.81	+1.43	0.78	14	4.0	14	14	7	9	nw.	W. J. Cavanaugh.
Average for Eastern Division				53.6	-4.0	82	10†	14	26†	1.71	-0.19	1.31	14	1.9	9	13	8	9	nw.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	51.7	-6.2	90	10	15	26	1.40	-0.20	0.60	25	4.5	8	10	7	13	se.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peavey Elevator Co.
Bisbee	Towner	1,601	39	53.8	-2.9	90	8†	13	28	0.75	-1.00	0.40	16	T.	3	14	5	11	se.	Robert L. Peterson.
Bismarck	Burleigh	1,670	68	56.2	-1.9	93	10	18	26	2.39	+0.91	0.74	17	4.5	8	.....	.....	.....	.....	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	3	55.2	-2.1	95	10	16	26	2.08	+0.85	0.85	17	4.1	11	13	6	11	se.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	54.1	-1.4	90	9†	15	28	0.88	-1.25	0.13	16	0.2	5	15	6	9	se.	N. D. School of Forestry
Carrington	Foster	1,579	44	50.4	-6.5	89	8	18	26†	2.40	+0.89	0.91	13	1.0	12	18	7	5	w.	Soo Line Agent.
Carson	Grant	2,500	30	55.0	-3.1	93	7†	11	26	2.24	+0.64	0.88	17	4.0	11	15	9	6	n.	J. W. Evans.
Center	Oliver	.....	4	53.3	.....	95	7	10	27	1.99	.....	0.45	17	6.0	11	8	16	6	nw.	Fred L. Heintz.
Dogden Butte II	McLean	1,880	16	54.0	-3.5	87	9†	20	27	1.77	+0.23	0.45	18	3.5	8	12	9	9	s.	R. L. Williams.
Drake	McHenry	1,634	13	54.2	-3.4	98	10	17	27	1.25	+0.29	0.35	18	0.1	11	14	4	12	w.	H. G. Kringsen.
Dunseith	Rollette	1,682	46	52.9	-2.1	90	10	16	26†	0.43	-1.31	0.21	17	T.	4	13	15	2	sw.	Geo. Gehres.
Eckman	Bottineau	1,500	37	53.0	-2.7	92	9	13	27	0.87	-1.09	0.16	21	0.3	6	11	14	5	nw.	R. F. Nowak.
Energy II	McLean	1,750	27	54.0	-4.2	92	8	12	26	1.81	+0.34	0.60	25	8.0	7	10	14	6	s.	H. S. Solenberger.
Fessenden	Wells	1,610	30	53.7	-2.9	88	10	18	26†	1.37	-0.27	0.74	13	2.0	7	12	7	11	n.	John V. Zuber.
Fort Yates	Sioux	1,670	42	57.8	-2.4	96	10	19	26	2.59	+1.07	1.00	17	1.0	9	15	6	9	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	55.0	-1.2	95	6	17	27	0.83	-0.78	0.35	25	4.2	8	9	7	14	sw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	53.5	.....	85	10	13	26	2.19	+0.82	0.50	17	5.5	8	9	10	11	s.	E. L. Hunt.
Garrison	McLean	1,925	65	53.8	-2.1	92	7†	13	26	1.68	+0.08	0.56	25	9.0	8	10	14	6	se.	E. L. Vorachek.
Granville	McHenry	1,504	35	.....	.....	.....	.....	.....	.....	0.72	-0.49	0.18	15	0.5	9	16	9	5	ne.	Fred Roble.
Hansboro	Towner	1,597	34	52.0	-2.2	89	6	18	27†	0.90	-1.08	0.70	15	T.	3	15	8	7	sw.	W. E. Disher.
Harvey	Wells	1,596	39	.....	.....	.....	.....	.....	.....	1.30	-0.25	0.31	18	1.0	10	10	11	4	nw.	Orville Hoksche.
Leeds	Benson	1,515	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Carl T. Carlson.
Linton	Emmons	1,711	25	55.6	-4.2	93	10	15	26	3.27	+1.67	0.73	17	5.0	13	12	7	11	se.	Wm. Heyerman.
Maddock	Benson	1,604	27	55.3	-1.6	92	8	18	27	0.82	-0.99	0.22	18	1.0	9	12	11	7	nw.	A. T. Felland.
Mandan	Morton	1,750	28	55.0	-3.6	95	10	16	26	2.59	+1.10	0.86	18	4.0	7	13	1	11	se.	No. Gt. Plains Field. Sta.
Max																				

Climatological Data for September 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha	Golden Valley	2,908	15	55.0	-3.4	92	8	14	26	1.68	+0.41	0.58	17	1.4	8	14	11	5	nw.	H. A. Bury.
Amidon	Slope	2,759	19	55.0	-2.2	94	6	16	26	1.80	+0.25	0.84	17	T.	9	10	13	7	w.	Stanley W. Bale.
Beach	Golden Valley	2,062	36	55.2	-2.2	94	6	16	26	1.25	-0.04	0.42	17	0.5	9	5	16	9	nw.	Mrs. H. Russell.
Berthold Agency H.	McLean	1,958	13	54.8	-2.7	93	8	12	26	1.80	+0.21	0.69	17	9.0	6	15	12	3	nw.	H. W. Case.
Bowbells	Burke	2,872	27	51.8	-1.8	99	6	13	27	1.07	-0.37	0.28	16	4.1	8	11	6	13	s.	Charles Kaufman.
Bowman	Bowman	2,872	27	53.9	-3.9	94	9	13	26	1.58	+0.30	0.83	18	T.	8	14	3	13	se.	Oscar L. Erickson.
Crosby	Divide	1,954	33	52.0	-2.8	92	6	14	27	1.36	-0.03	0.36	16	3.5	10	8	7	15	s.	J. H. Phelps.
Dickinson	Stark	2,543	49	53.4	-3.0	93	8	18	26	2.27	+0.95	0.88	18	1.5	10	11	10	9	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,583	2	55.2	.....	.....	.....	.....	.....	1.61	.....	0.69	17	2.1	10	9	10	11	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	53.3	-3.2	95	8	14	26	2.68	.....	1.24	1.10	18	3.5	13	12	9	se.	O. T. Evenson.
Epping	Williams	2,224	31	55.1	-1.6	93	6	16	27	0.98	-0.41	0.21	25	5.0	9	13	4	13	se.	T. Beachler.
Fairfield	Billings	2,790	5	.....	.....	.....	.....	.....	.....	2.86	+1.78	1.03	17	0.8	9	15	6	9	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,780	2	55.0	.....	.....	.....	.....	.....	1.85	+0.48	0.74	17	3.2	7	11	11	8	nw.	Verne King.
Golva	Golden Valley	2,780	2	53.3	.....	.....	.....	.....	.....	1.28	.....	0.64	17	T.	9	11	13	6	w.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	2	.....	.....	.....	.....	.....	.....	2.40	.....	0.69	17	4.0	8	10	16	4	w.	Peavey Elevator Co.
Hanks	Williams	2,114	34	.....	.....	.....	.....	.....	.....	1.92	+0.52	0.91	17	1.0	10	11	14	5	nw.	J. A. Springer.
Hettinger	Adams	2,675	34	57.2	-1.4	96	9	15	26	1.39	-0.22	0.53	16	7.5	8	14	5	11	nw.	Theo. E. Eckberg.
Kenmare	Ward	1,799	10	53.6	.....	.....	.....	.....	.....	1.71	+0.42	0.66	17	0.5	11	10	4	16	nw.	S. P. Grane.
Marmarth	Slope	2,714	32	54.7	-3.1	94	9	16	26	2.18	+1.13	0.69	17	1.8	8	12	9	9	nw.	Fred Hartman.
Mary	McKenzie	2,271	26	.....	.....	.....	.....	.....	.....	1.49	+0.12	0.75	17	T.	9	9	11	10	nw.	Ovide E. Grenier.
Medora	Billings	2,271	26	.....	.....	.....	.....	.....	.....	1.68	+0.27	0.68	17	T.	11	4	15	11	nw.	P. G. Wick.
Mott	Hettinger	2,424	34	57.4	-0.4	94	8	17	26	1.60	+0.12	0.43	17	2.0	9	9	14	7	nw.	F. S. Slight.
New England	Hettinger	2,400	47	55.0	-2.4	94	8	16	26	2.20	+1.22	1.43	17	4.0	7	18	7	5	nw.	Peter F. Ficek.
New Hradec	Dunn	1,929	26	54.0	.....	.....	.....	.....	.....	1.33	-0.21	0.43	7	4.0	12	7	22	1	nw.	C. E. Shubert.
Parshall	Mountrail	1,954	36	51.7	.....	.....	.....	.....	.....	1.82	+0.23	0.80	25	3.0	9	10	9	11	nw.	U. S. Customs Service.
Portal	Burke	2,203	36	54.3	-0.9	98	6	15	27	1.82	+0.31	0.66	25	6.1	5	15	9	6	e.	Geo. B. Gee.
Powers Lake	Burke	2,467	25	55.4	-0.9	98	6	14	26	1.64	+0.28	0.75	17	6.0	8	9	13	8	nw.	Assumption Abbey.
Richardton	Stark	1,835	16	54.7	-3.5	92	8	17	26	1.11	-0.07	0.35	26	6.0	9	8	16	6	....	H. J. Bugge.
Sanish	Mountrail	2,258	4	52.0	-5.5	95	6	13	26	1.1	.....	0.47	25	7.5	4	13	9	8	w.	Leroy Edwards.
Stanley	Mountrail	2,279	13	52.3	.....	.....	.....	.....	.....	0.85	+0.87	0.60	22	6.0	4	13	8	9	nw.	B. V. Olson.
Tioga	Williams	1,864	2	.....	.....	.....	.....	.....	.....	1.22	-0.03	0.46	18	T.	8	6	21	3	nw.	Walter Grunewald.
Trotters	Golden Valley	2,084	28	54.8	.....	.....	.....	.....	.....	1.12	.....	0.58	25	5.5	7	13	13	4	nw.	Soil Conservation Serv.
Van Hook	Mountrail	2,084	28	54.8	.....	.....	.....	.....	.....	1.89	+0.57	0.58	22	3.0	8	9	16	5	nw.	J. C. Zeller.
Watford City	McKenzie	2,258	14	56.4	-1.3	95	6	20	27	1.46	+0.39	0.36	25	5.3	9	11	11	8	sw.	L. Holter.
Willdore	Williams	1,878	62	.....	.....	.....	.....	.....	.....	1.53	+0.44	0.48	16-17	2.6	10	12	9	9	se.	U. S. Weather Bureau.
Williston	Williams	.....	.....	55.4	-1.2	94	8	21	27	1.67	+0.36	1.43	17	3.1	9	11	11	8	nw.	.....
Average for Western Division				54.3	-2.6	99	6	4	26	1.67	+0.11	1.43	17	2.7	9	12	9	9	nw.	.....
Average for the State				54.0	-2.8	99	6	4	26	1.67	+0.11	1.43	17	2.7	9	12	9	9	nw.	.....

Daily Temperatures for September 1942

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley ³	Maximum...	73	65	67	78	78	78	85	82	81	90	64	75	70	75	74	56	46	48	60	71	54	53	46	41	34	37	36	57	67	71	....	63.7
	Minimum...	57	47	36	48	53	61	58	58	57	62	45	39	51	44	39	46	39	31	25	39	37	36	25	22	24	15	17	21	27	31	....	39.7
Beach	Maximum...	72	65	80	80	87	94	89	93	92	80	71	78	71	65	74	61	55	53	62	71	70	59	55	49	48	50	50	71	80	73	....	69.9
	Minimum...	47	45	45	45	49	53	55	52	57	57	51	38	48	47	40	34	32	31	39	40	39	30	25	25	16	21	31	31	29	45	....	40.5
Bismarck Airport ¹	Maximum...	74	67	74	81	84	85	92	93	91	95	70	78	61	75	78	58	50	52	62	75	58	60	47	44	36	39	39	59	73	76	....	67.5
	Minimum...	58	48	43	49	52	64	68	61	61	59	48	41	30	48	45	50	37	35	30	39	43	43	32	29	28	16	19	27	32	38	....	42.8
Bottineau	Maximum...	68	62	66	76	77	89	85	87	90	90	72	78	73	83	83	78	50	52	63	81	57	51	41	41	44	45	60	70	80	....	67.9	
	Minimum...	50	48	43	46	52	55	54	62	61	60	50	41	45	50	36	46	40	34	28	31	40	34	31	25	25	17	26	15	25	40	....	40.3
Carson	Maximum...	73	68	72	82	84	88	93	92	89	93	69	80	70	75	77	58	53	53	62	74	60	58	50	42	35	44	63	78	75	....	68.5	
	Minimum...	54	50	43	46	51	59	58	54	58	62	50	39	52	47	43	42	36	33	30	36	49	41	28	21	21	11	18	26	37	46	....	41.4
Crosby	Maximum...	68	62	77	78	85	92	82	92	90	75	71	81	75	64	61	53	46	56	64	73	56	53	39	43	35	42	64	75	79	....	65.9	
	Minimum...	48	47	44	45	45	48	52	48	47	55	47	41	42	50	39	40	38	31	29	31	40	39	29	29	30	18	14	15	26	35	....	28.1
Devils Lake ¹	Maximum...	71	61	64	75	77	86	84	83	83	82	67	76	68	69	69	53	48	50	60	73	55	51	42	38	40	42	40	55	70	76	....	63.7
	Minimum...	52	43	40	47	50	62	58	60	60	60	48	44	51	46	44	42	39	34	32	46	37	32	30	29	29	21	22	32	32	39	....	41.7
Dickinson Airport ³	Maximum...	70	66	75	76	84	90	88	92	91	85	74	77	71	70	75	60	52	52	62	71	68	56	54	45	42	42	45	63	78	73	....	68.2
	Minimum...	52	47	46	46	50	56	57	51	59	63	53	42	52	49	47	42	32	32	35	43	41	44	31	25	28	17	22	29	34	42	....	42.2
Dunn Center	Maximum...	70	65	75	76	85	88	87	95	91	86	72	80	78	69	75	61	48	53	63	74	57	56	41	44	33	42	44	64	76	79	....	67.7
	Minimum...	47	47	47	44	46	46	51	47	48	58	52	39	39	46	41	42	43	35	33	34	42	42	32	28	28	14	20	23	25	29	....	38.9
Fargo ¹	Maximum...	70	65	69	77	80	83	82	87	88	78	85	71	76	74	70	72	60	53	51	62	73	55	55	47	43	41	42	54	66	73	....	65.1
	Minimum...	59	46	38	52	49	62	60	59	58	64	51	46	49	53	45	46	42	39	30	40	41	35	31	26	32	26	25	20	36	37	....	43.2
Fessenden	Maximum...	72	70	61	75	80	85	86	87	87	88	78	68	65	72	69	68	52	50	60	73	62	54	52	37	37	42	39	55	70	74	....	66.2
	Minimum...	56	46	37	40	46	61	56	59	60	63	54	43	53	48	43	45	40	36	30	40	40	35	29	28	2	2	2	2	2	2	....	41.2
Fullerton	Maximum...	73	66	72	75	80	78	78	79	80	87	76	74	68	74	70	62	50	52	62	70	70	69	53	49	43	38	37	38	55	63	71	65.0
	Minimum...	59	50	38	46	52	62	59	56	55	60	57	44	51	54	44	50	41	39	30	38	43	40	37	26	32	19	19	20	31	35	....	42.9
Garrison ³	Maximum...	71	88	71	77	83	89	92	92	90	91	72	79	62	70	73	56	48	54	65	75	56	56	45	43	40	42	40	55	72	76	....	67.4
	Minimum...	51	47	45	44	48	55	56	52	56	55	49	37	49	45	41	46	38	36	32	40	41	40	30	21	13	15	23	30	38	....	40.1	
Grafton	Maximum...	74	67	67	75	76	86	84	84	82	82	82	78	76	72	71	71	54	54	62	75	73	54	51	43	42	43	43	55	65	73	....	67.1
	Minimum...	56	49	34	49	45	60	60	59	60	61	59	48	49	47	47	45	35	40	28	40	43	27	34	28	28	21	21	18	27	33	....	41.7
Grand Forks Airport ³	Maximum...	72	63	66	76	78	85	83	83	80	84	82	76	71	70	72	65	50	51	61	75	67	52	51	41	40	42	43	53	66	71	....	65.7
	Minimum...	54	40	34	49	44	61	64	60	60	62	58	45	47	48	47	47	35	40	28	39	43	28	34	27	29	20	23	18	30	34	....	41.6
Jamestown Airport ³	Maximum...	75	66	69	78	82	82	86	84	83	88	64	77	66	72	73	56	46	53	60	73	56	55	45	43	35	36	42	55	68	75	....	64.8
	Minimum...	57	42	37	48	49	62	57	59	57	60	49	44	51	49	44	46	40	31	29	37	39	35	25	29	24	18	21	19	29	33	....	40.7
Kenmare	Maximum...	70	60	73	79	84	94	90	90	89	91	73	81	74	68	68	52	48	56	65	74	58	56	43	41	39	44	41	55	73	80	....	66.9
	Minimum...	49	48	45	45	46	55	57	51	51	65	50	48	48	52	41	41	40	30	34	41	40	40	30	29	29	19	16	16	28	33	....	40.3
Langdon	Maximum...	74	64	64	75	74	84	82	84	83	84	77	77	71	65	67	58	52	55	63	72	71	62	44	43	42	40	45	56	66	78	....	65.4
	Minimum...	51	44	36	48	48	58	52	58	60	59	53	39	50	45	44	42	32	37	27	40	39	23	30	26	24	18	19	18	30	39	....	39.6
Marmarth	Maximum...	59	67	78	78	84	87	88	92	94	82	72	76	70	71	76	63	50	37	33	61	69	58	61	58	48	45	52	51	68	78	....	68.7
	Minimum...	51	49	49	78	81	51	50	38	60	60	50	37	50	36	48	45	37	30	29	34	43	41	35	27	30	16	26	28	32	36	....	40.7
Minot ³	Maximum...	71	62	72	78	84	94	91	94	92	93	74	82	68	72	73	55	48	54	65	78	59	56	44	42	41	45	43	59	75	82	....	68.2
	Minimum...	53	41	40	40	48	58	56	49	59	50	44	44	49	45	41	45	40	33	27	46	40	38	31	27	22	12	16	25	28	38	....	39.3
Mott	Maximum...	72	67	75	79	86	90	92	94	91	88	71	78	70	74	78	60	51	50	63	73	63	59	54	47	43	45	46	64	79	78	....	69.3
	Minimum...	49	50	42	54	46	55	64	58	63	66	55	33	55	49	56	50	37	34	30	51	47	45	32	30	29	17	22	26	53	65	....	45.4
Pembina Airport ³	Maximum...	73	60	67	73	76	85	80	84	80	79	70	75	74	71	68	57	50	52	60	73	60	52	42	40	45	41	55	67	74	....	64.1	
	Minimum...	52	40	35	48	46	62	58	58	61	63	52	48	44	47	47	39	33	26	36	34	27	30	26	28	22	22	17	28	35	....	39.9	
Sharon	Maximum...	73	63	66	75	77	82	84	83	79	84	76	77	64	68	71	60	47	51	61	73	57	54	45	41	33	43	43	58	68	72	....	64.1
	Minimum...	57	48	35	50	48	62	59	61	57	59	51	41	48	50	42	45	38	37	27	38	44	32	32	24	27	19	21	16	32	38	....	41.3
Steele	Maximum...	72	65	70	77	82	83	87	89	89	89	72	75	74	72	72	66	47	59	48	71	57	55	51	40	35	36	37	57	71	76	....	65.8
	Minimum...	56	45	37	46	45	60	55	59	60	63	55	48	50	51	40	47	38	25	36	34	41	40	30	28	27	10	15	19	29	35	....	40.8
Valley City	Maximum...	74	71	69	76	78	81	79	85	80	87	87	74	73	69	72	70	56	58	67	77	69	65	54	51	41	52	44	52	64	72	....	68.1
	Minimum...	60	50	38	47	49	63	62	60	58	61	60	45	51	56	44	49	41	40	29	37	44	35	37	28	31	21	24	22	29	32	....	43.4
Wahpeton	Maximum...	70	68	68	79	81	81	81	80	80	85	85	74	73</																				

Daily Precipitation for September 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Casselman	Red	.08										.09		.30	.07		.14	.14					.05										1.13
Cooperstown 2	Sheyenne	.05		T	.02							.07		.50	.04	.14		.53				.06		.25		.35							2.01
Courtenay	James									.05		.06		.59	.07	.04		.60				.18				.52							2.11
Devils Lake 1	Devils Lake	.02		T							T			.41	T	.15	T	.10	.01		.01	.31	.12	.01		.01	T						1.15
Edgeley	James										.02			.38	.07		.10	.33	.16			.31	.15	.10	.02		.70						2.03
Edmore	Devils Lake	.16												T	.08	.13	.34		.05			.31		.16									1.23
Ellendale	James	.30									.20			.10	.21			.25	.12			.18	.03	.10	.02	.55	.32						2.38
Fargo 1	Red	T		T							.22			.25	.05	.07	.02	.24	.03			.08	.09	.01	T	.21	T						1.27
Forman	Sheyenne	.17									.09			.10	.15		.06	.52	.06				T			.64	.27						2.06
Fullerton	James	.05									.08			.08	.48		.03	.32	.59			.24	.05	.13	T	.80	.08						2.43
Grafton	Red	T												.06			.19		.11			.18	.12										0.66
Grand Forks Airport 3	do	T									.01			.12	.05		.10	.05	.16			.09	T	.13	T	T	T						0.71
Hankinson 2	do	1.10									T			1.31			.10	.02	.54			T	T	.34	.14		1.01						4.56
Hannah	Pembina	T					.35			.40	T			T	T		.70					T	.15	.15									1.74
Hillsboro	Red	.02						.33			T			.27	.06		.10		.22			.14	.05	.15		.07							1.43
Jamestown Airport 3	James	.02									T	.04		1.16	.52	.05	.02	.40	.01			.01	.06	.02	T	.21							2.52
Langdon	Pembina	.02												.04			.51					.12		.08	T								0.77
Larimore	Red	T		.07					.02		.05	.02		.07	.10		.12	.05	.22			.12	.05	T	T								0.89
Lisbon	Sheyenne	.03									.10	.03	.22	.02	.03	T	.30					.01	.07	.07	.02		.86						1.76
Mayville	Red																																
McHenry	James	.05		.03						.14	T			.51	.07	.11	.20	.28	.18			.15	.05	.10		.04							1.91
McLeod	Sheyenne									.12				.29	.05	.08	.10		.39			.32				*	.31						1.72
McLeod	James	.12											.15	.06	.08	.51	.09		.29			.32	.08	.12		.96							2.65
Oakes	Red																																
Park River	do	T									T			.34	T		.29		.08	.17		.27	.16	.62	T		T						0.74
Pembina Airport	do	.02									.08											.17											1.19
Petersburg	do	.07		.01							T	.05		.35	.13		.18	.26	.17			.18	.06	.08	T	.10	T						1.64
Snaron	do	T									T			.45	.70		.07	.10	.19			T	.10	.06	T	.24	.09						2.00
Valley City	Sheyenne	T										.01	.01	.35	.78	.10	.22	.49	.11			.44	.10	.09		.22	.23						3.81
Wahpeton	Red	.66																															
Middle Division																																	
Ashley 3	Missouri	T									.02			.05	T	.06	T	.30	T			.13	.20	.04		.60							1.40
Bisbee	Devils Lake													T		.40						.25	.15	.10	T	.37							0.75
Bismarck 1	Missouri	.02						T			T	.02	.01	.52	.01	.02	.03	.85	T			T	.07	.15	.08	T							2.08
Bottineau 2	Mouse															T	.13	.02				.07	.05	.10	.06								0.38
Carrington	James	.02	.02											.91		.04	.09	.17	.70			.20	.08	.16	.01	.15							2.40
Carson	Heart	.08									.06			.14		.03	.05	.88	.12			.20	.26	.12		.30							2.24
Center	Missouri	.07												.17	.15	.05	.03	.45	.40			.05	.07	.15		.40							1.99
Dogden Butte	Mouse	T	T		T									.25	.01	.15	.21	.45				.11	T	.16		.43							1.77
Drake 2	do	.02												.02	.23		.14	.10	.35			.10	.04	.11	.03	T	.11						1.25
Dunseith	do	.10															.21					.16	T	.07	.05	T							0.43
Eckman	do	T													.06	.10		.02		T		.16	T		.02	.01							0.37
Energy	Missouri													.25	.10	.10	.30	.50				T	T	.16		.60							1.81
Fessenden	James													.74		.09		.21				.05	.04	.11	.13								1.37
Fort Yates	Missouri									T	.20			.06	T	.10		1.00	.10			.25	.30	.08	.50								2.59
Foxholm (near)	Mouse	.09		T										.04	.03	.12	.04	.07				T	T	.09	T	.35							0.83
Gackle	James	T									T	.08		.37	T	.15	.50	.01				T	.31	.25	.05	.48							2.19
Garrison 3	Missouri													.10	.06	.08	.14	.49				.04	.16		.56								1.63
Granville	Mouse	.16					T							.05	.03	.18	.04	.06				.17	.01	T	.02								0.72
Hansboro	Devils Lake													T	.70							.10	.10	T									0.90
Linton	Missouri	.36						.13		.29	.08			.44	.02		.12	.73	.12			.25	.13	.10		.50							3.27
Maddock	Sheyenne			.07										.20	.02	T	.02	.22				.13	.05	.02		.69							0.82
Mandan 2	Missouri	.26												.82	T	T	.07	.86				.04	.07	T	T	.47							2.59
Max 2	do	T						.05						.02		.08	.12	.23	.55		.10	.07	.04	.18		T	.35						1.79
McClusky	do	.08												.64	.03	.16		.63				.03	T		.37								1.94
Minot 3	Mouse	.01					T							.03	.07	.03	.14	T			.08	.03	.03	.07	T	.30							0.79
Mohall	do	.24												T	.04	.13	.05	.07			.03	.05	.04	.21									

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., OCTOBER 1942 No. 10

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Moderate temperatures and below normal precipitation characterized the weather during the month. Minimum readings were mostly above freezing until the 22d when temperatures dropped and colder weather prevailed until the close of the month. Precipitation occurred on the 3d, 4th, and 12th, and from the 22d to the 25th. A storm period prevailed from the 22d to the 25th with high winds and rain turning to snow. Blizzard conditions prevailed at some places during this period. The mild weather during the first three weeks permitted much threshing and corn harvesting. Fall plowing was below average due to dry ground and labor shortage. Ranges and livestock remained in very good condition.

TEMPERATURE

The mean temperature for the state was 46.5°, or 2.5° above the 1892-1942 average for October. The mean temperature for the eastern division was 46.5°; for the middle division, 46.5°; and for the western division, 46.4°. The highest mean temperature was 48.8° at Washburn, and the lowest, 43.1° at Wishek, making a range in mean temperature of 5.7°. The absolute range was 93°, from 90° at Fort Yates on the 10th, to -3° at Center and Steele on the 25th. The average daily excess in temperature for the state since January 1, 1942, is 1.7°.

PRECIPITATION

The average precipitation for the state was 0.46 inch, or 0.55 inch less than the 1892-1942 average for October. In the eastern division the average amount was 0.55 inch; in the middle division, 0.41 inch; and in the western division, 0.42 inch. The greatest monthly amount reported was 1.81 inches at Milnor; the least was a trace at Kenmare. The greatest amount recorded in any 24 consecutive hours was 0.85 inch at Milnor on the 3d. The accumulated excess in precipitation for the state since January 1, 1942, is 2.08 inches. The average snowfall was 1.8 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Dust Storms																															
Fogs	4	10	5	1	1																										
Lunar halos																															
Solar halos																															
Sleet																															
Thunderstorms	1	2	3																												

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	Percentage of sunshg
Bismarck.....	29.99	30.49	17	29.46	21	9.9	42	nw.	20	84	54	60	55
Devils Lake.....	29.95	30.42	17	29.43	21	8.7	29	nw.	20	84	51	57	65
Fargo.....	29.96	30.40	17	29.41	21	11.3	41	nw.	20	83	55	64	64
Williston.....	29.99	30.50	17	29.55	29	7.6	30	nw.	20	80	55	53	65

† And other dates.

COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	47.2	95	7	0.25	1.20	0.30	0.58	T.	3	15	8	8	8
1893...	40.6	79	0	1.17	1.08	0.89	1.05	0.9	5	11	11	8	8
1894...	43.0	77	16	2.28	1.76	0.94	1.66	0.0	6	14	8	8	8
1895...	40.5	85	-12	0.31	0.15	0.27	0.24	0.0	2	16	8	8	8
1896...	40.2	88	5	1.25	0.43	0.40	0.69	0.0	3	14	8	9	9
1897...	45.9	93	6	1.01	0.75	0.56	0.77	0.8	4	13	8	9	9
1898...	38.8	84	8	2.60	2.42	1.67	2.23	4.7	6	8	8	15	15
1899...	42.1	86	7	1.16	1.21	1.15	1.17	1.3	5	11	8	12	12
1900...	48.2	87	14	2.34	1.30	0.98	1.54	T.	6	15	4	12	12
1901...	47.5	88	11	2.96	1.22	0.65	1.61	T.	5	17	7	7	7
1902...	43.7	87	10	1.70	1.20	0.95	1.28	0.7	4	16	6	9	9
1903...	47.0	81	11	1.42	0.80	0.60	0.94	0.2	3	19	5	7	7
1904...	46.6	87	10	1.55	0.60	0.46	0.90	T.	5	12	7	12	12
1905...	40.3	93	0	0.59	0.22	0.28	0.36	1.2	5	8	12	11	11
1906...	45.0	89	0	0.75	0.45	0.27	0.49	1.4	4	14	9	8	8
1907...	44.4	88	4	1.02	0.66	0.16	0.61	0.2	3	21	5	5	5
1908...	43.0	86	8	1.46	1.36	2.07	1.63	0.7	6	11	7	13	13
1909...	43.1	97	0	0.88	0.63	0.45	0.65	0.9	3	14	8	9	9
1910...	48.2	95	0	0.49	0.66	0.38	0.51	0.1	3	16	8	7	7
1911...	42.5	86	-10	1.25	1.27	1.20	1.24	0.5	6	11	8	12	12
1912...	44.4	90	0	0.68	1.09	1.44	1.07	3.5	4	16	6	9	9
1913...	39.3	90	-2	2.40	1.34	1.03	1.59	0.7	4	12	9	10	10
1914...	50.0	97	0	1.20	0.93	0.65	0.93	T.	4	16	8	7	7
1915...	46.6	87	10	1.22	0.91	1.14	1.09	0.2	4	17	8	6	6
1916...	40.0	85	-2	0.49	0.88	0.73	0.70	2.0	4	12	8	11	11
1917...	34.7	82	-4	0.87	0.76	0.71	0.78	5.4	5	8	11	12	12
1918...	46.2	90	4	0.80	0.45	0.35	0.53	0.8	4	14	8	9	9
1919...	33.5	84	-18	0.93	1.14	1.35	1.14	9.3	6	11	9	11	11
1920...	49.3	95	6	0.53	0.28	0.83	0.55	0.1	3	16	8	7	7
1921...	47.3	88	16	0.80	1.09	0.10	0.66	T.	4	16	8	7	7
1922...	45.7	98	8	0.37	0.65	0.73	0.58	2.3	3	15	7	9	9
1923...	44.0	84	-8	0.56	1.02	1.08	0.89	0.5	4	14	7	10	10
1924...	50.3	86	19	2.31	2.14	2.82	2.42	0.3	7	17	5	9	9
1925...	33.3	66	-16	0.83	0.64	0.96	0.81	3.7	6	8	9	14	14
1926...	42.6	85	4	2.54	0.86	0.68	1.36	1.0	6	10	10	11	11
1927...	47.0	88	12	1.53	1.49	0.96	1.33	1.0	5	14	8	9	9
1928...	43.5	85	3	0.69	0.18	0.51	0.46	0.6	2	15	8	8	8
1929...	46.8	88	10	2.87	1.63	1.05	1.85	5.1	6	17	5	9	9
1930...	40.8	86	0	2.04	1.90	1.48	1.81	0.3	7	10	9	12	12
1931...	47.7	90	10	2.63	0.93	0.60	1.39	0.2	6	15	6	10	10
1932...	38.3	90	-3	2.33	2.41	2.06	2.27	9.1	8	9	7	15	15
1933...	41.5	88	5	0.39	0.48	0.74	0.54	1.7	4	14	8	9	9
1934...	49.0	94	5	2.11	0.83	0.08	1.01	0.1	3	14	8	9	9
1935...	43.5	86	-10	0.29	0.08	0.12	0.16	0.7	2	15	9	7	7
1936...	42.3	90	-5	0.23	0.16	0.24	0.21	1.1	3	14	9	8	8
1937...	43.9	94	1	0.40	0.92	1.08	0.80	0.2	4	12	9	10	10
1938...	50.9	95	4	0.27	0.44	0.95	0.55	1.1	4	16	7	8	8
1939...	41.3	84	-6	1.17	0.64	0.44	0.75	1.2	7	8	10	13	13
1940...	50.7	89	18	2.16	1.26	1.26	1.56	T.	6	14	8	9	9
1941...	44.5	81	0	1.78	1.24	0.94	1.32	2.0	5	13	9	9	9
1942...	46.5	90	-3	0.55	0.41	0.42	0.46	1.8	4	14	8	9	9
Period	44.0	98	-18	1.26	0.95	0.83	1.01	1.4	4	14	8	9	9

Climatological Data for October 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Casselton	Cass	961	46																	C. Hayford.
Cavalier	Pembina	894	32	46.6		81	7	13	27	0.19	-1.22	0.10	3	T.	2	13	7	11	nw.	City Light & Power Co.
Colgate	Steele	1,180	9							0.26		0.14	21	T.	2	14	13	4	nw.	M. H. Badger.
Cooperstown	Griggs	1,428	45	44.8	+0.1	82	8	10	26	0.38	-0.74	0.18	22	1.0	3	16	9	6	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	12							0.29	-1.14	0.29	21	1.5	1	11	11	9	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	45	46.3	+3.9	80	10	10	25	0.23	-1.02	0.11	21	0.7	7	10	10	11	nw.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	48.2	+2.6	83	8	5	25†	0.59	-0.50	0.28	25	5.5	5	11	20	0	nw.	O. A. Thompson.
Edmore	Ramsey	1,524	18	41.7	+2.2	79	10	9	25	0.20	-0.85	0.13	3	T.	2	16	10	5	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	47.2	+1.3	85	7	8	25	1.42	+0.31	0.32	25	7.0	8	16	6	9	nw.	J. E. Demmer.
Fargo	Cass	895	15	47.2	+2.7	83	7	15	25	0.81	-0.88	0.34	3	2.2	7	12	9	10	nw.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	47.0	+4.0	83	7†	10	26	1.08	-0.37	0.48	3	5.4	3	18	9	4	s.	Helge Dyre.
Fullerton	Dickey	1,439	44	46.0	+0.7	83	7	7	27	1.25	-0.18	0.42	24	7.0	6	14	7	10	nw.	F. O. Alin.
Grafton	Walsh	827	50	48.0	+4.2	83	7	14	27	0.06	-1.16	0.06	22	T.	1	16	9	6	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	831	51	47.0	+3.3	85	7	9	27	0.14	-1.26	0.07	3	T.	4	12	9	10	nw.	University of N. Dak.
Grand Forks Airport	Grand Forks	832	2	46.2		84	7	10	27	0.09	-0.05	0.05	3	T.	2	12	8	11	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	47.4	+0.8	84†	11	15	25	1.28	+0.13	0.54	4	5.6	4	13	5	13	w.	Joseph Rindt.
Hannah	Cavalier	1,568	50	45.6	+4.8	80	10	7	26	0.40	-0.74	0.40	3	T.	1	7	17	7	sw.	A. E. Prior.
Hillsboro	Trail	901	42	47.8	+2.6	84	7	16	27	0.16	-1.31	0.10	22	T.	4	12	10	9	nw.	Alfred Jahnke.
Janestown	Stutsman	1,457	50	47.6	+2.9	84	7	10	25	0.82	-0.46	0.33	3	1.8	3	12	10	9	nw.	State Hosp. for Insane.
Janestown Airport	Stutsman	1,494	2	46.2		83	7	10	25	0.75	-0.29	0.21	21	2.6	6	10	11	10	nw.	U. S. Airway Comm. Sta.
Kenal	Stutsman	1,440	3	46.0		84	7	10	25	0.41	-0.28	0.21	21	T.	3	14	9	8	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	45.8	+4.9	80	1	7	25†	0.12	-1.02	0.10	3	0	2	17	2	12	nw.	V. Sturlingson.
Larimore	Grand Forks	1,134	49	48.0	+3.9	85	7	11	27	0.31	-1.25	0.13	3	0.4	6	15	4	12	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	46.6	+1.9	84	7	11	26	1.16	-0.17	0.35	25	6.0	6	16	3	12	nw.	J. O. Halverson.
Mayville	Trail	975	46																nw.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	44.4	+1.1	83	7	7	25	0.25	-0.77	0.21	21	1.6	3	15	7	9	nw.	C. E. Blasky.
McLeod	Ransom	1,075	31	46.0	-0.5	84	7	11	26†	1.61	+0.13	0.49	3	6.2	6	17	7	7	sw.	J. G. Carlson.
McVie	Nelson	1,467	12																	M. Kabeary.
Milnor	Sargent	1,117	3	46.2		87	10	10	26	1.81	-1.21	0.85	3	5.0		24	7	0	se.	E. W. Wilson.
Oakes	Dickey	1,318	13	44.8	-1.2	84	7	5	27	1.41	+0.19	0.54	25	6.5	6	19	2	10	nw.	F. H. Murray.
Park River	Walsh	998	38	46.8	+3.1	76	2	11	27	0.03	-1.25	0.03	28	0.4	1	18	2	11	nw.	E. J. Taintor.
Pembina	Pembina	789	68	46.2	+4.6	81	7	9	25†	T.	-1.31	T.	3†	T.	0	13	9	9	nw.	S. W. Douglas.
Pembina Airport	Pembina	803	3	46.0	+4.4	80	7†	13	24†	0.10	-1.21	0.65	3	0.2	4	5	12	14	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12							0.08	-1.26	0.05	3	0.5	2	17	9	5	sw.	T. M. Rykkan.
Sharon	Steele	1,516	18	46.6	+3.0	83	7	12	26	0.27	-1.09	0.11	3	1.2	5	15	7	9	nw.	Nels O. Grefschim.
Valley City	Barnes	1,245	36	47.5	+2.4	83	7	14	26	0.58	-0.60	0.19	3	2.5	4	16	4	11	sw.	I. C. Robertson.
Wahpeton	Richland	962	50	48.5	+1.5	81	10†	13	26	1.05	-0.52	0.37	3	4.6	7	18	6	7	nw.	W. J. Cavanaugh.
Average for Eastern Division				46.5	+2.2	87	10	5	25†	0.55	-0.71	0.35	3	2.1	4	14	8	9	nw.	
Middle Division																				
Ashley	McIntosh	2,014	46	44.6	+0.2	82	7	0	27	0.97	-0.19	0.43	2	3.8	8	14	4	13	nw.	U. S. Airway Comm. Sta.
Boula	Mercer	1,797	28																	Peavey Elevator Co.
Bisbee	Towner	1,601	39	46.8	+3.0	84	2†	9	25	0.34	-0.75	0.34	3	T.	1	18	4	9	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	68	48.7	+3.5	85	10†	6	25	0.62	-0.37	0.26	3	2.0	3	13	7	11	nw.	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	3	47.1	+3.5	85	11	6	25	0.71	-0.23	0.30	2	1.5	5	13	7	11	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	45.2	+3.8	82	10	1	25	0.06	-1.01	0.06	13	0	1	16	2	18	nw.	N. D. School of Forestry
Carrington	Foster	1,579	44	45.4	+1.7	85	10	6	26	0.24	-0.74	0.16	22	1.0	2	17	10	4	nw.	Soo Line Agent.
Carson	Grant	2,500	30	47.2	+2.7	87	10	0	25	0.95	-0.02	0.60	24	4.0	6	17	8	6	nw.	J. W. Evans.
Center	Oliver	4	45.5			89	10	3	25	0.87	-0.31	0.24	4	7	5	10	14	7	nw.	Fred L. Heinz.
Dogden Butte II	McLean	1,880	16	48.1	+3.3	83	11	7	25†	0.68	-0.39	0.26	3	T.	4	15	5	11	nw.	R. L. Williams.
Drake	McHenry	1,634	13	46.4	+3.3	86	1	7	25	0.40	-0.60	0.23	3	0	5	16	3	12	w.	H. G. Krigen.
Dunseith	Rolette	1,682	46	46.6	+5.0	79	1†	4	25	0.35	-0.60	0.19	3	0.1	4	11	15	5	sw.	Geo. Gehres.
Eckman	Bottineau	1,500	37	45.5	+3.3	86	1	0	25	0.36	-0.57	0.28	4	T.	2	17	12	2	nw.	E. R. Sherman.
Energy II	McLean	1,750	27	46.8	+1.8	85	16†	4	25	0.23	-0.71	0.15	21	1.0	2	13	11	7	nw.	H. S. Solenberger.
Fessenden	Wells	1,610	30	46.4	+3.1	81	10†	7	25	0.25	-0.84	0.08	4†	0.4	4	13	10	8	n.	John V. Zuber.
Fort Yates	Sioux	1,670	42	47.8	+1.1	90	10	2	26	0.55	-0.57	0.30	24	3.0	3	21	5	5	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	47.2	+4.3	85	10	5	25	0.01	-1.00	0.01	21	T.	1	11	10	10	sw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	46.9		82	1	3	25	0.50	-0.60	0.30	24	3.8	4	12	8	11	nw.	A. H. Haut.
Garrison	McLean	1,925	65	45.4	+2.2	84	10	2	25	0.56	-0.38	0.27	21	1.3	4	16	10	5	nw.	E. L. Vorachek.
Granville	McHenry	1,504	35	47.8	+4.2	83	1†	4	25	0.31	-0.59	0.12	3	T.	6	20	9	2	nw.	Fred Rohle.
Hansboro	Towner	1,597	34	45.7	+4.4	82	2	6	25	0.25	-0.86	0.18	3	T.	3	15	8	8	nw.	W. E. Disher.
Harvey	Wells	1,596	39							0.40	-0.73	0.25	3	T.	4	9	15	7	nw.	Orville Hoksich.
Leeds	Benon	1,515	2																	Carl T. Carlson.
Linton	Emmons	1,711	25	46.6	+1.1	87	11	2	25	0.90	-0.21	0.26	24	4.1	5	16	4	11	nw.	Wm. Heyerman.
Maddock	Benon	1,604	27	46.4	+2.9	84	11	9	25	0.36	-0.73	0.15	3	T.	3	12	12	7	nw.	A. T. Folland.
Mandan	Morton	1,750	28	46.6	+1.9	84	11	4	25	0.69	-0.30	0.26	25	3.8	5	15	2	14	sw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	13	45.5	+2.6	85	10	8	25	0.28	-0.53	0.16	3	T.	3	11	6	14	sw.	A. W. Rice.
McClusky	Sheridan	1,943	24	47.3																

Climatological Data for October 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.				Precipitation, in inches				Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Lowest	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 40 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Western Division																			
Alpha	Golden Valley	15	15	47.0	+2.0	85	10	0.75	-0.23	0.38	21	0.8	8	18	6	7	nw.	H. A. Bury.	
Amidon	Slope	2,908	19	47.0	+2.0	85	10	0.56	-0.54	0.21	4	1.0	6	7	19	5	w.	Stanley W. Bale.	
Beach	Golden Valley	2,759	36	47.2	+2.7	86	10	0.55	-0.16	0.30	22	2.1	7	8	15	8	nw.	Mrs. H. Russell.	
Berthold Agency H.	McLean	2,082	48	46.4	+1.6	85	10	0.25	-0.19	0.10	24	1.3	3	15	10	6	nw.	H. W. Case.	
Bowbells	Burke	1,958	13	44.6	+4.0	85	10	0.25	-0.09	0.04	4	0.4	4	11	8	12	e.	Charles Kaufman.	
Bowman	Bowman	2,872	27	46.7	+1.9	84	10	0.67	-0.31	0.34	22	2.7	4	16	3	12	nw.	Oscar L. Erickson.	
Crosby	Divide	1,954	33	46.3	+4.1	87	10	0.25	-0.01	0.01	21	T.	1	14	6	11	nw.	J. H. Phelps.	
Dickinson	Stark	2,543	49	45.1	+1.3	85	10	0.26	-0.47	0.28	22	2.3	6	16	4	11	nw.	Leroy Moomaw.	
Dickinson Airport	Stark	2,583	2	47.4	.....	84	10	0.25	.....	0.15	22	1.2	5	12	13	6	uw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	46.0	+3.9	86	10	0.32	-0.59	0.15	21	2.2	3	13	10	8	nw.	O. T. Evenson.	
Epping	Williams	2,224	31	46.5	+4.4	87	10	0.20	-0.59	0.16	4	0	2	16	9	6	nw.	T. Beachler.	
Fairfield	Billings	.....	5	.....	.....	.....	.....	0.56	-0.06	0.18	21	5.5	4	14	12	5	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	47.6	.....	87	11	0.25	-0.39	0.22	21	3.8	5	14	9	8	sw.	Verne King.
Golva	Golden Valley	2,780	2	45.0	.....	85	10	0.21	.....	0.34	21	1.0	6	12	13	6	w.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	2	.....	.....	.....	.....	0.29	.....	0.10	21	1.4	5	17	6	8	.....	L. E. Boe.
Hettinger	Adams	2,675	31	48.6	+2.5	88	11	0.25	-0.41	0.16	24	3.0	4	5	17	9	nw.	J. A. Springer.	
Kenmare	Ward	1,799	10	46.8	.....	87	10	0.25	-1.06	T.	4	T.	0	13	12	6	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	47.4	+1.4	85	9	0.80	-0.05	0.30	24	3.6	7	16	4	11	nw.	S. P. Grane.	
Mary	McKenzie	.....	13	.....	.....	.....	.....	0.74	-0.04	0.21	21	3.6	5	14	11	6	nw.	Fred Hartman.
Medora	Billings	2,271	26	.....	.....	.....	.....	0.63	-0.19	0.25	24	2.5	5	15	6	10	nw.	Ovide E. Grenier.
Mott	Hettinger	2,424	34	48.0	+3.6	87	10	0.25	-0.41	0.20	22	1.0	7	5	16	10	nw.	P. G. Wick.	
New England	Hettinger	2,400	47	47.8	+3.7	86	10	0.56	-0.28	0.27	24	2.0	5	10	12	9	nw.	F. S. Sleight.	
New Hradec	Dunn	1,929	26	44.6	.....	81	10	0.26	.....	0.36	22	3.0	4	22	5	4	nw.	Peter F. Fick.
Parshall	Mountrail	1,954	36	43.4	.....	85	10	0.25	-0.71	0.10	25	1.2	1	8	22	1	nw.	C. E. Shubert.
Portal	Burke	2,205	36	44.8	+0.3	86	10	0.25	-0.72	0.12	28	2.0	4	21	3	7	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,467	25	44.8	+0.3	82	11	0.25	-0.49	0.36	15	T.	3	14	13	4	e.	Geo. B. Gee.	
Richardton	Stark	1,835	16	48.0	+3.4	83	10	0.25	-0.57	0.13	24	2.0	6	10	14	7	nw.	Assumption Abbey.	
Sanish	Mountrail	2,258	4	44.5	+0.3	88	10	0.14	-0.67	0.10	25	1.0	4	14	9	8	.....	H. J. Bugge.
Stanley	Mountrail	2,279	13	44.9	.....	84	10	0.12	.....	0.12	28	1.3	1	11	14	6	nw.	Leroy Edwards.
Tioga	Williams	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. V. Olson.
Trotters	Golden Valley	1,864	2	.....	.....	.....	.....	0.46	-0.37	0.29	21	3.5	6	7	18	6	se.	Walter Grunewald.
Van Hook	Mountrail	2,084	23	46.3	.....	86	10	0.06	-0.12	0.06	24	T.	1	16	8	7	nw.	Soil Conservation Serv.
Watford City	McKenzie	2,258	14	47.4	+3.2	87	10	0.25	-0.11	0.06	24	6.0	6	14	12	5	w.	J. C. Zeller.	
Wildrose	Williams	1,878	62	.....	.....	.....	.....	0.11	-0.71	0.06	4	0.3	3	16	5	10	sw.	L. Holter.
Williston	Williams	.....	46.4	+3.0	87	10	10	0.25	-0.41	0.28	23-24	2.9	5	15	9	7	nw.	U. S. Weather Bureau.
Average for Western Division				46.4	+2.8	88	10	-2	0.42	-0.41	0.38	21	1.8	4	13	10	8	nw.
Average for the State				46.5	+2.5	90	10	-3	0.46	-0.55	0.85	3	1.8	4	14	8	9	nw.

Daily Temperatures for October 1942

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley ³	Maximum..	75	76	67	61	70	74	82	65	72	80	79	74	71	68	71	75	66	72	74	57	46	42	35	29	20	33	26	27	38	38	43	58.3
	Minimum...	41	34	47	40	33	39	46	34	31	35	48	53	47	40	38	37	34	36	35	36	33	22	20	16	4	5	0	11	11	26	22	30.8
Beach	Maximum...	80	65	61	61	75	82	76	72	83	86	78	74	50	69	69	62	69	71	76	63	50	41	35	31	26	46	40	45	51	45	40	60.4
	Minimum...	45	41	37	42	34	34	45	41	43	39	54	41	41	43	43	46	30	38	37	42	28	33	25	15	5	15	25	22	22	29	22	34.1
Bismarck Airport ¹	Maximum...	79	81	70	65	75	72	81	68	79	82	85	72	54	74	74	72	68	76	79	55	49	43	38	28	23	31	27	31	40	44	46	60.0
	Minimum...	48	43	42	41	35	39	44	41	37	40	46	51	46	45	49	43	34	35	38	38	37	26	25	18	6	7	14	18	24	25	26	34.0
Bottineau ⁵	Maximum...	81	81	79	75	74	72	74	79	79	82	75	79	56	70	72	66	69	73	80	79	39	35	34	26	27	32	28	36	53	47	37	60.9
	Minimum...	40	49	39	34	32	34	34	32	35	34	35	55	46	46	46	41	30	29	30	29	23	22	15	12	1	10	12	14	18	20	17	29.4
Carson	Maximum...	82	83	70	59	75	75	85	84	80	87	85	70	57	72	72	73	70	75	79	59	46	43	36	29	25	32	28	34	44	43	45	61.2
	Minimum...	49	48	38	44	33	37	39	40	43	42	50	50	41	43	46	41	30	40	38	41	32	31	21	10	0	3	19	13	20	27	22	33.3
Crosby	Maximum...	76	73	69	60	73	76	62	69	82	87	77	69	53	72	71	66	68	73	78	66	49	45	35	29	29	33	31	32	49	44	41	59.3
	Minimum...	41	43	37	46	33	35	45	35	42	38	49	43	41	43	50	41	31	37	87	42	32	32	23	12	6	11	18	21	18	27	24	33.3
Devils Lake ¹	Maximum...	76	79	70	65	70	69	78	64	76	80	77	75	57	72	74	69	67	71	77	53	38	33	34	27	25	36	29	34	47	41	37	58.1
	Minimum...	49	45	43	45	37	37	48	39	36	42	46	57	49	47	40	43	32	40	41	33	26	24	20	17	10	12	16	20	24	26	24	34.5
Dickinson Airport ³	Maximum...	77	68	68	60	74	75	76	69	82	84	82	67	58	70	67	65	67	72	76	59	49	42	36	30	22	38	39	45	52	43	43	56.8
	Minimum...	44	45	38	45	35	39	49	42	43	43	45	45	42	44	49	44	31	33	41	45	35	31	23	15	8	9	24	18	25	30	24	35.1
Dunn Center	Maximum...	77	79	70	68	60	75	75	75	75	82	86	83	66	55	74	69	65	68	75	78	55	47	43	37	29	28	32	30	40	52	45	60.1
	Minimum...	44	35	38	35	44	27	34	42	38	35	38	40	44	46	49	44	28	31	35	45	36	32	23	16	5	6	18	14	18	28	24	32.0
Fargo ¹	Maximum...	72	75	58	63	70	69	83	65	70	81	81	79	69	73	72	75	66	71	76	62	44	34	36	32	28	37	31	33	35	42	45	59.0
	Minimum...	45	39	46	43	37	44	48	37	29	43	52	58	47	40	39	39	37	35	38	41	31	26	23	24	15	15	19	22	23	31	27	35.3
Fessenden	Maximum...	77	79	67	65	71	71	79	63	76	81	81	74	72	71	76	67	65	71	75	72	49	41	32	31	26	32	29	36	50	44	40	60.1
	Minimum...	50	40	41	47	35	25	45	28	31	43	41	53	47	44	37	43	29	38	37	45	29	24	18	12	7	12	15	20	20	26	23	32.7
Fullerton	Maximum...	73	72	65	62	71	68	83	81	69	73	79	74	71	71	70	71	65	72	75	60	50	40	38	34	24	32	29	28	36	39	41	58.6
	Minimum...	43	40	41	35	40	45	44	43	32	37	45	59	52	36	37	42	38	38	39	42	33	28	22	23	9	10	7	13	15	26	26	35.5
Garrison ³	Maximum...	79	78	70	63	74	72	76	67	82	84	81	72	52	72	70	66	68	74	78	53	46	41	35	26	25	32	28	34	50	44	43	59.0
	Minimum...	48	43	37	39	32	35	42	39	37	38	45	46	43	45	43	39	30	33	33	32	24	21	12	2	13	16	18	17	29	20	31.7	
Grafton	Maximum...	74	77	74	67	69	70	83	75	75	75	78	77	75	71	72	74	75	75	78	73	48	36	37	34	29	36	33	32	43	43	41	61.3
	Minimum...	43	41	49	49	36	41	42	28	38	40	58	50	44	36	42	35	40	41	43	33	29	24	24	15	17	14	15	19	22	25	34.7	
Grand Forks Airport ³	Maximum...	75	75	66	64	69	70	84	69	73	75	81	78	60	73	72	72	68	73	76	60	41	34	36	32	29	36	31	33	44	42	43	59.2
	Minimum...	41	40	50	44	35	38	41	40	27	39	42	58	47	38	34	39	32	87	35	40	32	28	24	23	18	15	10	14	20	22	33	59.5
Jamestown Airport ³	Maximum...	76	78	70	63	71	73	83	66	75	81	80	74	59	72	74	75	68	71	77	57	42	35	37	30	26	30	30	40	40	42	46	59.2
	Minimum...	44	38	48	45	39	40	44	34	30	39	44	58	46	42	33	40	34	35	38	35	31	24	20	20	10	12	20	19	22	30	19	38.3
Kenmare ⁵	Maximum...	84	72	70	62	73	72	70	69	82	87	81	70	54	70	71	67	69	76	80	52	49	42	35	23	30	32	27	37	52	45	40	59.5
	Minimum...	45	49	44	44	39	38	40	38	39	41	41	42	45	46	44	43	33	35	45	45	35	26	23	13	9	13	14	20	20	22	24	34.1
Langdon	Maximum...	80	77	73	67	68	72	79	72	75	79	73	76	70	71	72	70	69	76	75	72	43	35	39	35	30	42	29	30	47	45	37	60.0
	Minimum...	48	44	39	40	33	32	45	33	33	39	45	52	46	45	40	41	29	34	37	40	25	25	18	16	7	11	8	7	14	18	20	31.1
Marmarth	Maximum...	78	70	66	70	76	83	80	75	85	85	80	65	53	60	65	65	68	72	75	60	57	44	48	35	34	48	40	49	52	55	42	62.4
	Minimum...	44	35	32	31	30	33	36	45	40	32	45	45	43	38	44	48	27	30	48	41	38	34	28	15	7	7	25	22	20	24	20	32.5
Minot ³	Maximum...	84	82	74	70	75	74	75	68	82	86	81	76	53	74	72	67	70	72	82	55	48	44	35	25	27	31	29	39	54	44	41	60.9
	Minimum...	52	45	40	37	32	33	39	33	34	39	36	42	46	48	48	37	27	31	36	38	37	18	10	3	14	12	22	18	28	15	31	31.2
Mott	Maximum...	80	76	69	59	75	76	80	71	81	87	85	71	59	72	69	67	68	75	79	58	51	44	38	28	37	37	40	49	45	45	61.6	
	Minimum...	55	55	52	50	28	37	33	44	45	45	46	44	43	42	47	38	32	33	32	38	32	22	22	18	6	9	24	17	23	26	20	34.5
Pembina Airport ³	Maximum...	75	76	72	66	67	68	80	61	75	75	80	75	58	71	72	69	69	74	78	58	40	34	35	27	27	32	28	30	46	42	40	58.1
	Minimum...	43	45	45	43	35	43	46	36	30	39	41	57	49	46	40	43	39	35	36	39	32	28	23	13	13	19	13	13	22	20	26	33.9
Sharon	Maximum...	74	75	70	61	69	69	83	66	72	81	81	76	67	70	72	75	67	72	76	59	42	32	35	30	26	38	29	31	44	37	48	58.8
	Minimum...	48	45	47	47	35	37	50	34	35	43	44	53	51	47	43	45	35	35	38	42	23	24	17	19	14	12	14	19	22	25	20	34.3
Steele	Maximum...	75	80	68	63	72	70	80	66	74	82	86	76	69	72	74	71	66	72	75	53	44	47	35	32	23	32	28	40	42	41	43	59.7
	Minimum...	41	40	42	47	31	40	46	41	34	40	43	56	47	42	43	40	30	32	34	37	32	22	15	18	3	6	17	23	24	23	31.8	
Valley City	Maximum...	71	74	72	67	68	69	83	77	71	77	82	80	73	70	71	72	73	72	76	74	50	36	38	34	29	33	32	31	39	38	44	60.5
	Minimum...	43	39	51	44	40	40	41	40	28	41	41	54	52	44	36	38	36	34	33	43	29	29	22	26	15	14	18	21	23	28	26	34.0
Wahpeton	Maximum...	70	75	74	66	69	7																										

Daily Precipitation for October 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton	Red.			.15		.05									T.																		0.71	
Cooperstown ²	Sheyenne																					.29	.18	T.	T.								0.38	
Courtenay	James																					.11	T.	.01	.02	T.							0.29	
Devils Lake ¹	Devils Lake		.01	.06	.01								T.	T.									.15		.28	T.			.01		T.		0.23	
Edgeley	James			.04	.04																					.28							0.59	
Edmore	Devils Lake			.13																			.07										0.20	
Ellendale	James			.19	.04																		.18		.24	.32			.06	.09	.30		1.42	
Fargo ¹	Red.	T.		.34	.01																		.05	T.	T.	.10	T.	T.		.06	.16	.06	T.	0.81
Forman	Sheyenne			.48	T.																		.18										1.08	
Fullerton	James			.25	.12																		.24		.42				.18		.04		1.25	
Grafton	Red.				T.																		.06	T.									0.06	
Grand Forks Airport ³	do			.05	T.									T.							T.		.04	T.	T.	T.					T.	T.	0.09	
Hankinson ²	do	.18			.54																						.38						1.28	
Hannah	Pembina			.40																			T.	T.									0.40	
Hillsboro	Red.			.03	.02																		T.	T.							T.		0.10	
Jamestown Airport ³	James		.08	.18	.01																		.29	T.	T.	.18			.01				0.75	
Langdon	Pembina			.10																			T.	.02	T.								0.12	
Larimore	Red.			.13	.03																		.07	.02	.02	.04							0.31	
Lisbon	Sheyenne			.16	T.																		.18	.06			.35			T.	.22	.19	1.16	
Mayville	Red.			.02	.02																													
McHenry	James			.49	.02																		.21										0.25	
McLeod	Sheyenne	T.	.48																					.22		.30	T.			.20	.12	T.	1.61	
Oakes	James				.12	.15																									.10	.28	1.41	
Park River	Red.			T.	T.				T.						T.								T.										0.03	
Pembina Airport	do				.03																		.01	T.							.01	T.	0.10	
Petersburg	do				.05																		T.	T.		.03							0.08	
Sharon	do				.11	.06									.01								T.	.05	.04	T.							0.27	
Valley City	Sheyenne			.19	.14																		.15		.04	T.		.10					0.58	
Wahpeton	Red.	.07		.37	.03																			.14	T.			.19		T.	.01	.24	1.05	
Middle Division																																		
Ashley ³	Missouri		.43	.01	.12				T.													T.	.12	T.	.03	.21	T.			.04	.01		0.97	
Bisbee	Devils Lake			.34																		T.	T.		.07	.06	T.	T.					0.34	
Bismarck ¹	Missouri		.30		T.				.01				T.	T.	T.							T.	.27										0.71	
Bottineau ²	Mouse													.06																			0.06	
Carrington	James			.08									.02											.16		T.							0.24	
Carson	Heart			.04	.07								.05									.12		.10	T.	.60					T.		0.95	
Center	Missouri		.18		.03																		.30		.31								0.87	
Dogden Butte	Mouse			.26	.17								T.	.02									.23		T.	T.	T.						0.68	
Drake ²	do			.23	.03	.01																	.11										0.40	
Dunseith	do			.19	T.									.12										.03		T.	.01	T.					0.35	
Eckman	do				.28								T.										.08		T.								0.36	
Energy	Missouri		T.		T.								T.	T.									.15		T.	.08							0.23	
Fessenden	James			.05	.08								.08										.04		T.								0.25	
Fort Yates	Missouri		T.	.20	.05			T.						T.												.30							0.55	
Foxholm (near)	Mouse				T.																		.01		T.	T.			T.	T.			0.01	
Gackle	James				.03																		.10		T.	.30		.07					0.50	
Garrison ³	Missouri		.15										.03	T.	.03								.27		T.	.11							0.56	
Granville	Mouse		.01	.12	.07	T.							.02	.03									.09		T.						T.		0.34	
Hausboro	Devils Lake			.18										.02									.05	T.									0.25	
Linton	Missouri			.18	.12																		.25		T.	.26	.09						0.90	
Maddock	Sheyenne			.15	.07																		.14		T.	T.							0.36	
Mandan ²	Missouri		T.	.18		.02				T.	T.				T.									.12		.11	.26						0.69	
Max ²	do			.16										.04										.08	T.								0.28	
McClusky	do			.37	.21									T.											T.								0.58	
Minot ³	Mouse		T.		T.									.04	.03								.04		T.	T.	T.		T.				0.11	
Mohall	do				.05																				T.				T.				0.15	
Napoleon ²	Missouri		.23											.02									.10		.20	.60				.10			1.15	
New Salem	Heart				.02								.09	T.									.02			.17	T.						0.30	
Pettibone	James			.03																				.22			.10						0.35	
Rolla	Devils Lake			.28									T.	.02									.05		T.								0.35	
Rugby (near)	Mouse			.38	T.																		.09		T.	.01							0.48	
Ryder	Missouri												.03	.02									.22		T.	.02	T.						0.29	
Selfridge	do			.10											T.								.05		.05	.15	T.						0.35	
Steele	do			.20	T.																		.09	T.		.04	.09						0.42	
Tagus	Mouse				T.									T.									.02		T.					T.	.01		0.03	
Towner	do																								T.								0.05	
Turtle Lake	Missouri			.21	.12								T.	.05									.04		T.	T.	T.						0.39	
Tuttle	do			.15									T.	.02									.12		T.	T.	.10	.06					0.43	
Velva	Mouse			.18										.01	.02								.09		T.								0.30	
Washburn	Missouri			.09										T.									.08			T.	.11						0.28	
Westhope	Mouse													.02											T.	T.				.16			0.25	
Willow City	do			.22									.05										.02		T.	.07							0.36	
Wishek ²	Missouri			.20	T.									T.	T.									.08		.11	.21	T.					0.60	
Western Division																																		
Alpha	Lit. Missouri		T.		.11				.02					T.	T.							.02	.38	.05	.04	.12					T.	.01	0.75	
Amidon	do		.02		.21				.01																									

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ²Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³Data for 24 hours ending 12:30 a.m. C.S.T. ⁴Precipitation measured with recording gage. ⁵Precipitation included in the next following measurement. T, Trace, or precipitation less than 0.01 inch. [WBO, Minneapolis, 12-2-42-1100]

05 Not West Rd
47

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LI BISMARCK, N. D., NOVEMBER 1942 No. 11

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

November was a mild and pleasant month, with the temperature above normal and the precipitation below normal. Warm weather prevailed from the 1st to the 24th, but the temperature during the last week of the month was considerably below normal. The highest readings occurred generally on the 14th and 15th. The precipitation was light and occurred mostly as light snow during the first and fourth weeks. No severe storms were reported. Late harvesting and threshing made good progress during the month and livestock was in good condition with feed plentiful.

TEMPERATURE

The mean temperature for the state was 28.0°, or 1.3° above the 1892-1942 average for November. The mean temperature for the eastern division was 27.4°; for the middle division, 27.8°; and for the western division, 28.7°. The highest mean temperature was 33.2° at New England, and the lowest, 21.7° at Pembina Airport, making a range in mean temperature of 11.5°. The absolute range was 87°, from 73° at Hettinger on the 15th, to -14° at Eckman on the 30th. The average daily excess in temperature for the state since January 1, 1942, is 1.6°.

PRECIPITATION

The average precipitation for the state was 0.18 inch, or 0.40 inch less than the 1892-1942 average for November. In the eastern division the average amount was 0.22 inch; in the middle division, 0.13 inch; and in the western division, 0.18 inch. The greatest monthly amount reported was 0.55 inch at Pembina; the least was a trace at eight stations. The greatest amount recorded in any 24 consecutive hours was 0.40 inch at Westhope on the 5th. The accumulated excess in precipitation for the state since January 1, 1942, is 1.68 inches. The average snowfall was 1.5 inches.

MISCELLANEOUS PHENOMENA
(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	15				2	1	2	23	15	7						1	2			1	2			3		1	1				
Lunar halos																1							3	1					1	2	
Solar halos																															
Sleet	1			3	1				1	4																	2	2	1	3	
Thunderstorms																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			Percentage of sunshin
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a.m.	12:30 p.m.	6:30 p.m.	
Bismarck.....	30.00	30.66	21	28.98	15	9.3	31	nw.	9	81	62	66	53
Devils Lake.....	29.96	30.60	21	29.02	15	8.6	25	se.	3	85	62	71	56
Fargo.....	29.98	30.63	21	29.07	15	12.7	39	se.	3	82	62	72	54
Williston.....	29.98	30.60	21	28.97	15	6.4	28	w.	16	82	64	65	44

† And other dates.

COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	22.3	75	-26	0.80	0.95	0.61	0.79	7.4	4	8	9	13	
1893...	22.4	74	-27	0.72	0.75	0.24	0.57	4.6	3	9	10	11	
1894...	23.1	71	-25	0.44	0.54	0.43	0.47	2.6	4	10	8	12	
1895...	20.6	76	-25	1.18	1.01	1.08	1.09	8.2	5	8	9	13	
1896...	8.1	62	-32	2.06	2.47	2.17	2.23	21.7	9	8	7	15	
1897...	20.0	86	-28	0.27	0.33	0.36	0.32	2.8	3	12	9	9	
1898...	23.0	69	-30	0.42	0.30	0.30	0.34	3.1	3	13	8	9	
1899...	36.0	68	2	0.26	0.51	0.16	0.31	1.0	2	15	4	11	
1900...	20.4	64	-29	0.28	0.29	0.40	0.32	5.2	5	14	7	9	
1901...	26.8	70	-7	0.10	0.09	0.19	0.13	1.6	1	15	8	7	
1902...	29.6	69	-12	0.25	0.11	0.36	0.24	1.9	3	11	6	13	
1903...	25.3	78	-20	0.27	0.22	0.28	0.26	2.5	2	13	4	13	
1904...	35.7	80	-10	0.10	0.09	0.07	0.09	0.7	1	18	5	7	
1905...	31.6	88	-38	1.66	1.54	0.89	1.36	11.0	9	7	13	10	
1906...	23.8	68	-16	1.90	1.34	1.23	1.49	10.2	7	10	7	13	
1907...	30.2	85	-15	0.08	0.10	0.05	0.08	0.7	1	16	8	6	
1908...	31.1	75	-15	1.10	0.91	0.80	0.94	8.2	4	12	8	10	
1909...	29.4	88	-23	0.68	0.31	0.44	0.48	4.6	3	11	9	10	
1910...	23.9	68	-23	0.34	0.44	0.43	0.40	3.2	2	8	10	12	
1911...	16.7	58	-33	0.70	0.60	0.63	0.64	7.1	6	12	8	10	
1912...	31.8	70	1	0.09	0.06	0.06	0.07	0.5	1	14	9	7	
1913...	34.1	77	-2	0.21	0.23	0.21	0.22	1.6	2	15	8	7	
1914...	30.7	83	-30	0.45	0.31	0.23	0.33	2.6	2	13	10	7	
1915...	28.1	71	-10	0.81	0.83	1.21	0.95	3.7	4	10	10	10	
1916...	28.8	75	-18	0.10	0.25	0.46	0.27	1.7	2	16	8	6	
1917...	36.8	77	-7	0.20	0.13	0.05	0.13	1.4	1	16	6	8	
1918...	28.9	71	-18	1.31	1.09	0.49	0.96	5.3	4	13	6	11	
1919...	15.6	57	-36	1.88	0.96	0.62	1.15	11.8	5	11	8	11	
1920...	28.0	65	-14	0.55	0.33	0.14	0.34	2.1	3	10	9	11	
1921...	21.0	69	-30	0.52	0.71	0.83	0.69	6.3	5	7	8	15	
1922...	31.8	65	-8	2.97	2.26	1.50	2.24	6.3	6	7	7	16	
1923...	36.5	72	-5	0.58	0.45	0.39	0.47	0.6	3	13	8	9	
1924...	27.6	69	-15	0.19	0.17	0.17	0.18	1.9	2	11	9	10	
1925...	28.8	69	-17	0.42	0.17	0.13	0.24	1.3	2	14	8	8	
1926...	21.5	68	-23	0.72	0.54	0.60	0.62	6.2	5	6	7	17	
1927...	20.7	59	-24	0.71	0.72	0.65	0.69	7.1	6	7	8	15	
1928...	31.0	70	-11	1.08	0.28	0.09	0.48	0.2	1	15	8	7	
1929...	24.8	70	-21	0.57	0.46	0.56	0.53	5.2	5	9	8	13	
1930...	29.4	72	-21	1.56	0.62	0.43	0.87	6.2	5	13	7	10	
1931...	30.3	78	-10	0.98	0.40	0.27	0.55	5.0	3	13	7	10	
1932...	25.2	70	-17	0.70	0.38	0.45	0.51	4.6	4	10	10	10	
1933...	28.3	78	-15	0.81	0.58	0.56	0.65	6.6	5	9	8	13	
1934...	33.9	73	-1	0.51	0.22	0.10	0.28	1.0	3	13	7	10	
1935...	17.2	57	-25	0.70	0.79	0.69	0.73	8.1	6	8	8	14	
1936...	28.0	69	-28	0.37	0.33	0.31	0.34	4.0	4	13	8	9	
1937...	25.2	73	-25	0.51	0.40	0.33	0.41	3.5	4	10	7	13	
1938...	23.8	75	-21	0.63	0.94	1.04	0.87	7.9	6	8	10	12	
1939...	34.9	74	-4	0.04	0.02	0.02	0.03	T.	1	19	6	5	
1940...	22.0	59	-28	0.62	0.62	0.53	0.59	7.1	6	8	8	14	
1941...	30.5	69	-17	0.26	0.48	0.46	0.40	3.6	5	9	8	13	
1942...	28.0	73	-14	0.22	0.13	0.18	0.18	1.5	3	10	10	10	
Period	26.7	88	-38	0.68	0.56	0.49	0.58	4.6	4	11	8	11	

Climatological Data for November 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Casselton	Cass	961	46					-7	30											C. Hayford.
Cavalier	Pembina	894	32	23.2		57	23	-4	25	0.44	-0.35	0.20	5	3.0	3	8	5	17	nw.	City Light & Power Co.
Colgate	Steele	1,180	9							0.20		0.20	5	0.5	1					M. H. Badger.
Cooperstown	Griggs	1,428	45	32.8	+5.5	64	10	-5	30	0.11	-0.57	0.09	5	1.2	3	8	8	14	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	12							0.11	-0.46	0.11	4	1.0	1	10	14	6	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	45	26.2	+1.7	61	14	-6	30	0.08	-0.64	0.04	3†	1.4	3	8	7	15	nw.	U. S. Weather Bureau.
Edgely	LaMoure	1,568	41	29.9	+0.6	63	14	0	28	0.04	-0.42	0.03	25	0.2	2	5	19	6	nw.	O. A. Thompson.
Edmore	Ramsey	1,524	18	24.2	-0.4	58	14	-12	30	T	-0.70	T	24	T	0	17	10	3	w.	Mike Davis.
Ellendale	Dickey	1,457	47	30.8	+2.4	62	14†	0	30	0.32	-0.30	0.17	25	1.4	2	10	6	14	nw.	J. E. Demmer.
Fargo	Cass	895	15	27.5	+0.4	61	15	-8	30	0.28	-0.62	0.10	4-5	2.7	5	6	13	11	nw.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	30.9	+2.3	66	15	-3	30	T	-0.62	T	25	T	0	14	9	7	s.	Helge Dyste.
Fullerton	Dickey	1,439	44	30.7	+1.7	60	15	-3	28†	0.16	-0.70	0.10	4	0.5	2	14	7	9	nw.	F. O. Ahn.
Grafton	Walsh	827	50	25.8	+0.8	56	23	-6	27	0.48	-0.26	0.26	5	1.5	2	7	16	6	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	830	51	25.8	0.0	55	15	-7	30	0.44	-0.38	0.28	5	3.6	3	8	11	11	nw.	University of N. Dak.
Grand Forks Airport	Grand Forks	833	2	24.0		54	15	-4	30	0.33	-0.17	0.17	4	3.1	3	6	12	12	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	28.6	-0.3	69	14	-3	28	0.27	-0.49	0.20	24	3.4	3	13	6	11	nw.	Joseph Rindt.
Hannah	Cavalier	1,568	50	22.5	+1.8	52	23†	-7	30	0.13	-0.62	0.10	4	1.5	2	8	14	8	nw.	A. E. Prior.
Hillsboro	Trall	901	42	27.5	+0.2	62	15	-10	30	0.16	-0.66	0.10	5	0.2	3	11	7	12	nw.	Alfred Janhke.
Jamestown	Stutsman	1,457	50	30.6	+3.3	63	15	-3	30	T	-0.68	T	2†	T	0	14	5	11	sw.	N. Dak. State Hospital.
Jamestown Airport	Stutsman	1,494	2	28.2		65	14	-5	30	0.24	-0.09	0.24	4†	1.6	3	6	11	13	nw.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	29.2		64	24	-6	30	0.11	-0.68	0.11	29	1.1	3	12	10	8	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	25.4	+1.7	59	14	-7	30	0.29	-0.53	0.12	9	1.4	5	12	12	6	nw.	W. Sturlingson.
Larimore	Grand Forks	1,134	49	27.0	+1.2	59	24	-6	27	0.40	-0.51	0.26	5	2.0	2	13	6	11	nw.	W. J. Goodison.
Lisbon	Ransom	1,091	38	29.8	+1.0	65	15	-5	30	0.20	-0.46	0.10	5†	1.2	2	12	5	13	nw.	J. O. Halverson.
Mayville	Trall	975	46	29.3	+1.5	60	24	-2	27†	0.18	-0.51	0.15	5	0.8	2	10	12	8	nw.	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	26.6	0.0	64	14	-6	30	0.17	-0.35	0.10	4	1.4	4	13	8	9	nw.	C. E. Blasky.
McLeod	Ransom	1,075	31	30.3	+0.6	66	15	-9	30	0.23	-0.43	0.16	9	2.3	2	12	16	2	nw.	J. G. Carlson.
McVelle	Nelson	1,467	12							0.14	-0.09	0.14	9	1.1	3	15	8	7	nw.	A. M. Casad.
Milnor	Sargent	1,117	3	29.2		65	15	-10	30	0.29	-0.15	0.29	24	3.9	3	12	10	8	nw.	E. W. Wilson.
Oakes	Dickey	1,318	13	30.6	+2.0	62	14	-2	30	0.19	-0.39	0.10	5	T	2	14	4	12	nw.	F. H. Murray.
Park River	Walsh	996	38	25.0	-2.0	54	24	-7	30	0.15	-0.54	0.12	9	T	2	18	7	5	nw.	E. J. Taintor.
Pembina	Pembina	789	68	23.8	+0.4	52	12	-6	27	0.55	-0.26	0.37	5	T	3	6	13	11	nw.	S. W. Douglas.
Pembina Airport	Pembina	795	3	21.7	-1.7	50	16	-5	27	0.28	-0.53	0.14	4	2.2	5	4	8	18	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12							0.12	-0.61	0.04	4†	1.2	3	14	12	4	se.	T. M. Rykkin.
Sharon	Steele	1,516	18	26.7	+2.0	60	24	-3	28	0.16	-0.60	0.09	4	1.9	4	7	13	10	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,245	36	30.6	+2.6	61	15	-3	30	0.27	-0.42	0.15	5	2.0	4	12	11	7	nw.	I. C. Robertson.
Wahpeton	Richland	962	50	29.2	+0.2	62	15	-10	30	0.20	-0.56	0.07	25	1.5	5	10	12	8	nw.	W. J. Cavanaugh.
Average for Eastern Division				27.4	+0.6	69	14	-12	30	0.22	-0.46	0.37	5	1.4	3	10	10	10	nw.	
Middle Division																				
Ashley	McIntosh	2,014	46	28.4	+0.4	65	15	-2	30	0.11	-0.51	0.08	4	0.8	2	10	7	13	nw.	U. S. Airway Comm. Sta.
Beulah	Merced	1,797	28							0.02	-0.50	0.02	27	0.5	1	4	11	15	nw.	Peavey Elevator Co.
Bisbee	Towner	1,601	39	25.8	-0.6	57	24	-10	30	0.02	-0.43	0.04	4	0.5	3	7	11	12	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	68	32.3	+3.8	66	14	-1	28†	0.06	-0.49	0.04	4	0.7	3	7	11	12	nw.	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	3	29.8	+3.3	66	14	0	28	0.08	-0.49	0.06	4	0.7	3	7	11	12	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	22.0	-1.6	58	14	-12	30	0.13	-0.36	0.13	7	1.0	1	16	5	9	nw.	N. D. School of Forestry
Carrington	Foster	1,579	44	27.2	-0.1	64	14	-4	30	0.12	-0.46	0.10	5	2.0	2	17	7	6	nw.	Soo Line Agent.
Carson	Grant	2,500	30	30.2	+0.4	70	15	4	28	0.19	-0.38	0.10	24	1.0	2	10	6	14	nw.	J. W. Evans.
Center	Oliver		4	29.0		63	14	-2	28	0.21	-0.13	0.13	4	1.9	2	4	23	3	nw.	Fred L. Heinz.
Dogden Butte II	McLean	1,880	16	28.7	+2.2	61	14	-2	30	0.20	-0.40	0.15	4	2.1	2	12	7	11	nw.	R. L. Williams.
Drake	McHenry	1,634	13	27.4	+1.5	64	14	-8	30	0.13	-0.27	0.12	5	0.9	2	17	4	9	nw.	H. G. Krigen.
Dunseith	Rosette	1,682	46	23.6	-0.5	55	14†	-12	30	0.12	-0.43	0.08	6	1.0	3	10	12	8	sw.	Geo. Gehres.
Eckman	Bottineau	1,500	37	24.4	-1.0	63	14	-14	30	0.13	-0.34	0.10	4	2.7	3	9	14	7	nw.	E. R. Sherman.
Energy II	McLean	1,750	27	29.8	+1.5	64	14	-1	28†	0.15	-0.29	0.15	4	1.0	1	12	11	7	nw.	H. S. Solenberger.
Fessenden	Wells	1,610	30	28.8	+2.2	60	14†	-5	30	0.09	-0.60	0.06	4	1.1	2	11	12	7	n.	John V. Zuber.
Fort Yates	Sioux	1,670	42	32.2	+2.2	69	15	4	27	0.20	-0.30	0.20	4	2.0	1	20	7	3	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	26.2	+0.6	62	14	-4	29†	0.12	-0.55	0.09	4	2.1	3	8	12	10	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	12	30.4		62	15†	-2	27†	0.10	-0.44	0.08	4	1.0	2	4	15	11	nw.	A. H. Haut.
Garrison	McLean	1,925	65	27.4	+0.9	62	14	-1	30	0.12	-0.33	0.11	4	1.2	2	10	9	11	nw.	E. L. Vorachek.
Granville	McHenry	1,504	35	28.4	+2.0	64	14	-6	30	0.33	-0.23	0.28	4	3.2	3	19	6	5	nw.	Fred Roble.
Hansboro	Towner	1,597	34	24.0	+0.5	59	14	-11	30	0.12	-0.47	0.12	4	1.5	1	14	7	9	nw.	W. E. Disher.
Harvey	Wells	1,596	39							0.11	-0.52	0.05	4	2.0	3	6	19	5	w.	Orville Hokscho.
Leeds	Benson	1,515	2																	Carl T. Carlson.
Linton	Emmons	1,711	25	31.0	+2.2	67	15	0	28†	0.05	-0.45	0.05	4	0.5	1	13	8	9	nw.	Wm. Heyerman.
Maddock	Benson	1,604	27	27.8	+1.6	62	14	-7	30	0.06	-0.40	0.04	4	0.2	2	10	12	8	nw.	A. T. Felland.
Mandan	Morton	1,750	28	28.6	-0.3	64	14†	0	28	0.04	-0.47	0.04	5	0.4	1	10	2	18	nw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	13	25.7	0.0	62	14	-6	30	0.07	-0.39	0.07	5	0.5	1	11	10	9	nw.	A. W. Rice.

Climatological Data for November 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha	Golden Valley	2,908	15	31.8	+1.2	69	15	8	29	0.41	+0.02	0.19	1	4.1	4	13	8	9	w.	H. A. Bury.
Amidon	Slope	2,759	19	31.8	-0.1	69	15	8	29	0.37	-0.03	0.16	1	4.0	5	11	9	10	w.	Stanley W. Bale.
Beach	Golden Valley	2,082	36	30.6	-0.1	60	13	6	27	0.38	-0.10	0.18	1	2.5	4	4	10	16	nw.	Mrs. H. Russell.
Berthold Agency	McLean	1,958	48	29.1	+0.7	63	14	1	30	0.06	-0.31	0.05	4	0.5	2	18	8	4	nw.	H. W. Case.
Bowbells	Burke	2,872	13	24.4	-0.8	60	14	6	29	0.04	-0.46	0.02	4	0.4	2	8	9	13	nw.	Charles Kaufman.
Bowman	Bowman	2,872	27	30.6	+0.1	67	15	10	29	0.29	-0.10	0.19	1	T.	2	12	3	15	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	33	25.8	-0.7	59	14	6	29	0.16	-0.44	0.10	19	1.6	3	5	11	14	nw.	J. H. Phelps.
Dickinson	Stark	2,543	49	29.1	+0.9	63	15	5	22	0.17	-0.30	0.08	2	2.3	4	10	9	11	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,577	2	29.8	.....	64	15	2	30	0.17	.....	0.05	1	1.5	5	5	12	13	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	29.2	+1.3	60	14	1	28	T.	-0.46	T.	2	T.	0	11	7	12	nw.	O. T. Evenson.
Epping	Williams	2,224	31	27.2	+0.9	59	15	5	29	T.	-0.44	T.	4	T.	0	11	10	9	nw.	T. Beachler.
Fairfield	Billings	.....	5	.....	.....	.....	.....	.....	.....	0.07	-0.35	0.05	1	0.5	2	13	5	12	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	31.6	.....	60	13	5	27	0.40	-0.09	0.23	2	3.5	4	8	8	14	nw.	Verne King.
Golva	Golden Valley	2,781	2	28.8	.....	65	15	1	30	0.15	.....	0.08	1	1.7	4	4	11	15	w.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	2	.....	.....	.....	.....	.....	.....	0.05	.....	0.05	4	0.5	1	19	6	5	.....	L. E. Boe.
Hettinger	Adams	2,675	34	32.8	+1.4	73	15	5	27	0.26	-0.16	0.13	1	2.5	3	3	13	14	nw.	J. A. Springer.
Kenmare	Ward	1,799	10	25.8	.....	60	14	4	29	0.17	-0.38	0.15	5	2.2	2	13	6	11	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	31.0	+0.1	66	15	6	27	0.51	+0.12	0.18	30	7.2	4	10	6	14	nw.	S. P. Grane.
Mary	McKenzie	.....	13	.....	.....	.....	.....	.....	.....	0.07	-0.36	0.07	1	T.	1	5	13	12	nw.	Fred Hartman.
Medora	Billings	2,271	26	.....	.....	.....	.....	.....	.....	0.24	-0.26	0.21	2	2.5	3	12	8	10	nw.	Ovide E. Grenier.
Mott	Hettinger	2,424	34	33.1	+3.8	70	15	5	20	0.13	-0.35	0.08	24	T.	3	17	8	5	nw.	P. G. Wick.
New England	Hettinger	2,400	47	33.2	+3.8	71	15	4	30	0.26	-0.18	0.22	1	2.5	2	9	9	12	nw.	F. S. Sleight.
New Hradec	Dunn	.....	26	28.8	.....	60	14	4	21	0.11	.....	0.05	4	1.3	4	19	4	7	nw.	Peter F. Mick.
Parshall	Mountrail	1,929	36	24.8	.....	58	14	9	30	0.10	-0.27	0.08	5	1.1	3	7	22	1	nw.	C. E. Shubert.
Portal	Burke	1,954	36	26.0	+1.0	58	14	11	29	0.02	-0.53	0.02	9	T.	1	2	15	13	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. B. Gee.
Richardton	Stark	2,467	16	31.6	+2.9	66	15	5	30	0.27	-0.21	0.15	4	2.6	2	8	11	11	nw.	Assumption Abbey.
Sanish	Mountrail	1,835	4	25.0	-2.0	62	14	4	28	0.21	-0.29	0.18	5	2.2	2	8	9	13	.....	H. J. Bugge.
Stanley	Mountrail	2,258	13	24.2	.....	55	14	6	30	0.11	.....	0.11	4	3.5	1	8	12	10	nw.	Leroy Edwards.
Tioga	Williams	2,279	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. V. Olson.
Trotters	Golden Valley	.....	2	.....	.....	.....	.....	.....	.....	0.23	-0.16	0.13	4	1.2	3	3	20	7	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	25	27.5	.....	60	14	4	30	0.15	-0.10	0.10	4	1.0	3	9	17	4	nw.	Soil Conservation Serv.
Watford City	McKenzie	2,084	14	29.2	+0.7	61	14	1	29	0.12	-0.38	0.08	4	1.5	2	13	10	7	w.	J. C. Zeller.
Willrose	Williams	2,253	62	.....	.....	.....	.....	.....	.....	0.06	-0.45	0.04	24	0.3	2	11	7	12	sw.	L. Holter.
Williston	Williams	1,878	.....	28.2	+1.0	60	14	1	29	0.10	-0.48	0.04	4	0.7	5	10	9	11	sw.	U. S. Weather Bureau.
Average for Western Division				28.7	+0.7	73	15	11	29	0.18	-0.31	0.23	2	1.7	3	10	10	10	nw.	.....
Average for the State				28.0	+1.3	73	15	14	30	0.18	-0.40	0.40	5	1.5	3	10	10	10	nw.	.....

Daily Temperatures for November 1942

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley ³	Maximum..	33	38	53	45	27	32	41	42	40	44	52	53	48	60	65	50	35	38	39	38	42	46	54	62	30	23	16	25	19	21	.....	40.4
	Minimum...	18	21	22	26	22	18	12	22	21	10	21	24	19	21	31	25	12	13	18	13	10	14	27	29	7	4	4	3	0	-2	.....	16.3
Beach	Maximum...	34	36	45	40	26	43	45	40	37	45	54	51	60	59	60	43	34	43	33	41	45	52	59	53	33	34	26	28	23	18	.....	41.3
	Minimum...	28	20	25	23	18	17	20	20	14	15	27	29	24	31	37	31	12	12	21	18	10	12	33	33	17	14	6	12	12	9	.....	20.0
Bismarck Airport ¹	Maximum...	34	41	52	38	28	36	45	39	33	46	55	54	56	66	62	52	31	38	30	44	45	50	55	63	26	29	21	29	24	20	.....	41.4
	Minimum...	22	26	26	26	23	20	17	22	14	11	23	30	23	25	33	27	16	14	23	15	14	19	25	26	7	6	5	0	5	2	.....	18.2
Bottineau	Maximum...	38	35	43	35	25	35	34	35	25	32	43	42	48	58	52	47	24	17	25	30	35	45	45	45	18	16	19	15	12	15	.....	32.9
	Minimum...	14	18	20	25	17	10	3	2	10	8	14	22	21	22	31	23	12	6	4	9	7	10	20	21	7	0	-6	-5	0	-12	.....	11.1
Carson	Maximum...	50	48	40	45	40	35	45	41	35	45	55	53	60	65	70	50	37	38	34	44	47	43	63	61	34	32	24	31	25	15	.....	43.5
	Minimum...	15	10	5	10	11	15	19	20	18	8	20	31	23	31	36	32	15	16	20	14	11	15	30	32	18	6	8	4	6	6	.....	16.8
Crosby	Maximum...	35	34	41	40	37	39	38	35	33	38	51	47	55	59	55	46	23	32	37	33	40	45	53	47	26	25	20	21	18	12	.....	37.3
	Minimum...	16	21	23	25	19	11	9	16	8	1	24	33	22	31	30	21	10	9	15	7	9	21	27	24	5	4	3	1	-6	-6	.....	14.4
Devils Lake ¹	Maximum...	31	33	44	40	26	34	44	42	35	38	45	46	44	61	55	50	27	32	28	36	40	51	56	57	17	19	20	25	18	9	.....	36.8
	Minimum...	22	22	18	26	15	11	15	25	16	16	20	19	19	26	38	24	12	10	17	14	11	24	32	17	6	2	0	2	-2	-6	.....	15.7
Dickinson Airport ³	Maximum...	37	37	47	39	25	40	47	38	34	42	56	52	61	61	64	46	29	42	30	41	44	55	60	54	25	32	21	30	18	14	.....	40.7
	Minimum...	28	19	26	25	17	12	21	21	14	15	28	26	25	31	33	19	16	16	19	17	13	21	34	23	16	9	6	10	7	2	.....	19.0
Dunn Center	Maximum...	36	39	43	39	27	40	49	42	34	45	54	51	59	60	57	48	33	38	30	43	45	53	59	54	34	33	20	30	1	17	.....	41.1
	Minimum...	22	20	24	25	21	14	13	17	17	8	23	34	19	28	30	27	13	10	20	9	7	18	32	33	15	7	2	1	5	3	.....	17.2
Fargo ¹	Maximum...	38	36	47	47	33	33	46	48	43	36	38	48	35	57	61	50	33	42	42	29	35	46	51	51	25	18	18	21	20	17	.....	38.1
	Minimum...	23	22	18	33	19	17	22	29	20	14	20	21	19	29	30	31	17	13	22	14	11	15	24	25	7	4	1	-1	-5	-8	.....	16.9
Fessenden	Maximum...	36	37	45	45	31	35	45	42	38	41	50	41	50	60	60	55	41	35	32	33	42	50	55	60	36	21	20	25	24	13	.....	40.0
	Minimum...	13	26	17	30	16	13	14	19	22	8	24	35	19	32	40	33	16	8	20	14	12	17	31	35	12	3	2	-1	3	-5	.....	17.5
Fullerton	Maximum...	41	39	50	51	35	35	42	43	44	43	49	54	45	57	60	53	37	45	35	33	38	42	48	50	40	26	19	24	19	20	.....	40.6
	Minimum...	19	27	23	36	25	23	21	25	27	14	25	33	23	24	31	37	19	15	25	18	14	22	30	15	7	17	3	9	3	.....	20.8	
Garrison ³	Maximum...	39	38	42	35	25	36	44	34	29	44	54	50	54	62	52	46	29	34	29	40	43	51	54	54	25	26	23	28	18	16	.....	38.5
	Minimum...	16	20	24	25	21	10	12	17	10	9	21	32	22	28	33	28	15	11	20	11	9	16	25	25	7	6	5	0	0	-1	.....	16.2
Grafton	Maximum...	37	32	44	46	35	28	32	37	36	30	35	41	32	47	48	51	46	32	29	31	35	49	56	52	35	16	18	25	25	11	.....	35.8
	Minimum...	29	23	11	34	20	3	11	17	25	7	21	29	16	23	30	32	19	9	22	7	12	15	26	29	5	2	-6	2	5	-4	.....	15.8
Grand Forks Airport ³	Maximum...	36	31	45	48	31	31	31	40	39	35	37	44	30	49	54	51	30	33	29	30	33	45	48	53	19	17	17	26	19	14	.....	34.8
	Minimum...	23	12	11	30	8	5	10	20	14	9	20	12	16	24	32	28	15	10	18	10	11	16	25	18	6	1	-2	-2	-3	-4	.....	13.1
Jamestown Airport ³	Maximum...	33	39	50	44	30	31	41	42	40	41	51	51	45	65	63	52	32	37	32	40	43	50	59	62	26	24	19	26	22	15	.....	40.2
	Minimum...	16	20	20	29	17	16	16	22	22	16	24	21	20	24	32	25	13	12	23	15	12	12	23	26	10	5	4	-2	-2	-5	.....	16.2
Kenmare	Maximum...	40	35	43	31	29	38	33	38	28	8	17	5	13	24	28	50	30	45	40	26	35	27	42	45	46	55	50	26	18	14	.....	36.6
	Minimum...	12	13	21	27	19	12	8	8	17	5	13	24	28	50	30	36	31	13	7	8	13	13	20	24	37	9	5	3	0	-4	.....	14.9
Langdon	Maximum...	37	46	40	41	34	31	48	42	37	33	34	43	33	59	50	48	44	27	29	39	39	49	52	54	39	20	21	23	20	10	.....	37.4
	Minimum...	25	17	15	32	16	4	4	20	22	6	13	17	10	20	30	29	13	3	18	3	6	20	29	35	1	1	-5	4	-2	-7	.....	13.4
Marmarth	Maximum...	37	42	48	42	27	42	42	46	40	47	55	54	62	43	66	46	37	52	36	42	43	52	59	53	38	33	26	28	25	20	.....	42.9
	Minimum...	29	28	30	24	21	16	16	16	19	14	25	26	25	20	31	28	13	17	21	11	8	13	25	35	18	10	6	10	10	6	.....	19.0
Minot ³	Maximum...	35	35	43	37	25	35	39	32	29	39	50	48	55	62	54	44	27	36	27	41	46	50	55	53	19	22	19	26	15	.....	37.1	
	Minimum...	9	19	19	24	11	12	9	14	13	5	24	30	28	38	35	20	11	6	20	10	13	22	36	19	3	5	-1	1	-2	-3	.....	15.0
Mott	Maximum...	40	40	51	43	28	40	48	46	41	49	57	54	63	65	70	56	36	47	41	46	46	58	67	65	43	37	32	34	31	27	.....	46.7
	Minimum...	29	20	26	28	21	18	18	19	22	10	23	29	21	22	28	31	14	14	21	5	9	13	29	35	20	9	10	7	10	11	.....	19.5
Pembina Airport ³ ...	Maximum...	36	26	42	44	29	27	26	37	32	30	33	44	27	47	50	27	30	28	30	33	48	51	45	14	13	15	24	10	7	.....	31.8	
	Minimum...	21	12	12	28	8	3	8	12	12	5	20	14	13	24	32	25	15	8	13	5	10	17	26	14	3	0	-5	-4	0	-2	.....	11.6
Sharon	Maximum...	37	38	44	46	32	31	39	43	37	38	31	47	36	57	58	49	33	31	27	37	40	49	53	60	38	20	18	25	17	14	.....	37.8
	Minimum...	19	23	14	32	16	7	12	21	20	9	16	26	15	22	32	33	15	9	22	11	10	18	26	35	6	0	-1	-3	1	1	.....	15.6
Steele	Maximum...	38	38	53	45	30	35	45	40	38	44	52	51	51	56	62	60	40	38	31	41	43	49	52	61	47	21	29	24	22	15	.....	41.7
	Minimum...	17	25	20	29	21	16	10	22	21	7	19	29	22	25	27	29	11	10	20	21	8	14	22	35	4	0	-1	-4	-2	-6	.....	15.8
Valley City	Maximum...	44	38	47	51	40	37	40	45	43	41	45	50	46	56	61	57	51	47	34	34	35	45	51	55	52	20	20	24	24	17	.....	41.7
	Minimum...	19	28	20	35	25	12	16	20	28	17	23	32	21	23	29	38	21	13	26	15	13	14	26	35	12	8	5	0	12	-3	.....	19.4
Wahpeton	Maximum...	42	35	48	47	46	34	46	47	47	47	40	46	50	52	62	54	47	41	41	30	35	44	52	49	45	32	18	21	19	18	.....	40.8
	Minimum...	20	27																														

Daily Precipitation for November 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Casselton	Red.																																		
Cooperstown ²	Sheyenne		T.		T.	.09				.01																T.					.01			0.11	
Courtenay	James				.11					T.																					.03			0.11	
Devils Lake ¹	Devils Lake	T.	T.	T.	.04	T.	T.		T.	T.															T.		T.		.01	T.	T.		0.08		
Edgeley	James				.04	.01																				T.	.03							0.04	
Edmore	Devils Lake																								T.								T.	0.04	
Ellendale	James					.15																				.17								0.32	
Fargo ¹	Red.	T.	T.		.10	T.			T.	.01	T.														.05	.02	T.			.10				0.28	
Forman	Sheyenne																									T.								T.	0.28
Fullerton	James				.10																				.06									.16	
Grafton	Red.	T.	T.		T.	.26				.22																					T.			.48	
Grand Forks Airport ³	do				.17	T.	T.		T.	.14	T.					T.									T.				T.	T.	T.		.33		
Hankinson ²	do	T.	T.																							T.					.02			0.13	
Hannah	Pembina				.10	.03	T.			T.															.20	T.						.05		0.13	
Hillsboro	Red.				T.	.10			T.	.04															T.	.02								0.16	
Jamestown Airport ³	James		T.		.09				T.	.09															T.	T.	.02					.06	T.		0.24
Langdon	Pembina				.09	.02				.12															.04		T.							0.29	
Larimore	Red.				.26					.14																					.02			0.40	
Lisbon	Sheyenne		T.							T.																								0.20	
Mayville	Red.				.15																				T.	.10								0.18	
McHenry	James				.10	.03				.02															T.	T.					.03			0.17	
McLeod	Sheyenne									.16																						.02		0.23	
Oakes	James				.10																					.09						.07		0.19	
Park River	Red.		T.		.03					.12															T.									0.15	
Pembina Airport	do	T	T		.14	.05			.03	.04										T					.02			T		T	T	T		0.28	
Petersburg	do				.04	.04				.04																								0.12	
Sharon	do	T.	T.		.09	.02				.04															T.	T.					.01			0.16	
Valley City	Sheyenne				T.	.15				.02															T.							.06		0.27	
Wahpeton	Red.		T.		.01	.04				.05																.07					.03			0.20	
Middle Division																																			
Ashley ³	Missouri		T.		.08					T.	T.															.03	T.							0.11	
Bisbee	Devils Lake																																	0.02	
Bismarck ¹	Missouri	T.	T.		.06	T.				T.									T.							.01	T.				.01	T.		0.08	
Bottineau ²	Mouse							.13																						T				0.13	
Carrington	James				.10																													0.12	
Carson	Heart				.09																					.10								0.19	
Center	Missouri	T.			.13	.08	T.																											0.21	
Dogden Butte	Mouse				.15	.05				T.																T.								0.20	
Drake ²	do				.12					T.	T.																							0.13	
Dunseith	do		T.		.02	T.	.08			T.																.02	T.					.01		0.12	
Eckman	do				.10		.02	T.		T																T								0.13	
Energy	Missouri				.15	T.				T.																								0.15	
Fessenden	James				.06	T.				T.																	T.					.03		0.09	
Fort Yates	Missouri				.20																													0.20	
Foxholm (near)	Mouse				.09	T.			.01	T.																.02								0.12	
Gackle	James				.08		.02			T.																	T.	T.						0.10	
Garrison ³	Missouri				.11	T.																				T.								0.12	
Granville	Mouse				.28	.03				T.																						.02		0.33	
Hansboro	Devils Lake				.12		T.			T.																T.								0.12	
Inton	Missouri				.05	T.																												0.05	
Maddock	Sheyenne				.04	T				T.																						.02		0.06	
Mandan ²	Missouri		T.			.04	T.			T.																T.								0.04	
Max ²	do	T.				.07																				T.								0.07	
McClusky	do					.01																				T.								0.01	
Minot ³	Mouse				.20	T.	T.	T.		T.																T.	T.	T.				.01	T.	0.21	
Mohall	do				.34	.01	T.									T.										T.		T.						0.35	
Napoleon ²	Missouri				.15																													0.15	
New Salem	Heart				.06																													0.06	
Pettibone	James				T.	.04																												0.08	
Rolla	Devils Lake			T.	.15	.02																				.03					.03			0.20	
Rugby (near)	Mouse	T.	T.		.07	.10				T.																T.								0.17	
Ryder	Missouri				.04	T.				T.																								0.06	
Selfridge	do	T.			.05																										.02			0.10	
Steele	do				T.	.01	T.																			.05						T.	T.	0.01	
Tagus	Mouse				.09	.01	T.																											0.11	
Towner	do				.28	.02				T.																.01								0.35	
Turtle Lake	Missouri				T.					T.																.05									T
Tuttle	do				.08	.04																										.02		0.1	
Velva	Mouse				.10	T				T.																								0.10	
Washburn	Missouri				T.	T																												T	0.10
Westhope	Mouse					.40	.04			T.																								0.44	
Willow City	do				.15	T.	T																											0.15	
Wishek ²	Missouri					.02					T																.02	T						0.04	
Western Division																																			
Alpha	Lit. Missouri	.19			.03					T.																.03	T.					T.	.16	0.41	
Amidon	do	.16	.04		.12					T.																									

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ²Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³Data for 24 hours ending 12:30 a. m. C.S.T. [†]Precipitation measured with recording gage. *Precipitation included in the next following measurement. T. Trace, or precipitation less than 0.01 inch. [WBO, Minneapolis, 12-24-42-1050]

05 Not Thick Feb.
NT

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., DECEMBER 1942 No. 12

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

December averaged very cloudy, with only 32% of the possible sunshine compared with a normal of 45%. Most stations had a trace or more of precipitation on more than 20 days. Precipitation was well distributed throughout the month, falling mostly as snow, but rain occurred on several days in the last week and walks and highways were very slippery and dangerous. A series of Polar air masses moved southeastward over the Red River Valley causing the coldest December weather in 10 years over eastern and central North Dakota. Southwestern North Dakota enjoyed above normal temperatures. Snowfall was heavy over the northeast, with many stations reporting more than a foot of snow. The Missouri River froze over on the 1st and attained average thickness by the end of the month. Farm work consisted mostly of yard feeding with livestock in excellent condition. No severe storms or high winds were reported.

M. S. C.

TEMPERATURE

The mean temperature for the state was 10.9°, or 2.4° below the 1892-1942 average for December. The mean temperature for the eastern division was 7.7°; for the middle division, 10.2°; and for the western division, 14.9°. The highest mean temperature was 21.4° at Marmarth, and the lowest, 3.1° at Hannah, making a range in mean temperature of 18.3°. The absolute range was 83°, from 53° at New England on the 28th, to -30° at Eckman and Willow City on the 12th. The average daily excess in temperature for the state since January 1, 1942, is 1.3°.

PRECIPITATION

The average precipitation for the state was 0.53 inch, or 0.05 inch more than the 1892-1942 average for December. In the eastern division the average amount was 0.67 inch; in the middle division, 0.52 inch; and in the western division, 0.39 inch. The greatest monthly amount reported was 1.30 inches at Fullerton; the least was 0.12 inch at Mott. The greatest amount recorded in any 24 consecutive hours was 0.69 inch at Park River on the 17th. The accumulated excess in precipitation for the state since January 1, 1942, is 1.73 inches. The average snowfall was 7.1 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	...	2	2	3	12	9	9	3	5	17	14	6	6	20	4	...	1	17	10	20	2	2	17	9	2	3	26	34	24	...
Lunar halos..	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1
Solar halos..	4	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thunderstms	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind (true velocities)				Relative Humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	30.11	30.77	27	29.54	26	9.1	40	nw.	17	88	81	86	33
Devils Lake.....	30.11	30.76	18	29.49	13	8.0	24	n.	17	92	87	88	36
Fargo	30.14	30.80	19	29.46	27	11.2	32	se.	28	91	82	86	34
Williston.....	30.06	30.71	18	29.48	22	6.5	26	nw.	17	90	82	83	24

† And other dates.

COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	7.1	60	-39	0.44	0.49	0.78	0.57	7.7	4	13	8	10	
1893...	4.7	55	-36	0.71	0.83	1.02	0.85	8.4	6	11	9	11	
1894...	19.1	70	-32	0.38	0.17	0.32	0.29	1.6	2	18	7	6	
1895...	13.8	62	-32	0.24	0.29	0.39	0.31	2.6	3	12	9	10	
1896...	16.4	53	-35	0.50	0.46	0.13	0.36	2.6	3	13	9	9	
1897...	10.8	69	-35	0.24	0.21	0.21	0.22	2.2	3	12	8	11	
1898...	12.1	51	-38	0.24	0.24	0.24	0.24	2.1	3	14	9	11	
1899...	12.8	60	-26	0.31	0.31	0.34	0.32	3.3	3	13	7	8	
1900...	17.3	58	-29	0.35	0.29	0.29	0.31	3.0	4	13	8	10	
1901...	12.4	61	-43	0.72	0.74	0.75	0.74	7.2	5	10	7	14	
1902...	7.8	49	-35	0.50	0.30	0.72	0.51	4.2	4	14	7	13	
1903...	11.6	57	-33	0.63	0.74	0.93	0.77	7.2	6	11	7	10	
1904...	14.2	55	-43	0.60	0.62	0.73	0.65	6.2	5	7	8	16	
1905...	15.3	55	-34	0.21	0.16	0.12	0.16	1.6	4	16	2	13	
1906...	8.4	48	-40	1.09	0.91	1.27	1.09	10.7	6	11	7	13	
1907...	20.1	68	-26	0.36	0.23	0.31	0.30	3.1	3	15	7	9	
1908...	14.4	62	-37	0.53	0.26	0.28	0.36	3.7	3	13	10	8	
1909...	5.2	54	-42	1.88	1.10	0.86	1.28	12.1	7	9	8	14	
1910...	12.9	56	-34	0.45	0.42	0.42	0.43	4.6	4	12	8	11	
1911...	14.9	61	-33	0.45	0.26	0.34	0.35	4.5	4	10	8	13	
1912...	18.9	72	-28	0.62	0.55	0.13	0.43	4.0	4	14	8	9	
1913...	22.7	61	-21	0.05	0.12	0.01	0.06	0.3	1	18	6	7	
1914...	5.4	57	-42	0.58	0.40	0.42	0.47	5.7	4	12	9	10	
1915...	15.8	57	-27	0.56	0.56	0.44	0.52	5.4	5	11	9	11	
1916...	2.7	61	-50	1.39	1.34	0.81	1.18	13.9	5	15	8	8	
1917...	0.7	58	-44	0.51	0.64	0.61	0.59	7.4	6	9	9	13	
1918...	18.5	65	-41	0.97	0.62	0.76	0.88	9.9	5	9	8	14	
1919...	7.4	49	-38	0.65	0.45	0.28	0.47	4.8	3	14	9	8	
1920...	15.2	59	-32	0.48	0.33	0.16	0.32	3.2	3	11	9	11	
1921...	16.5	59	-33	0.52	0.33	0.38	0.41	3.9	4	14	7	10	
1922...	8.5	55	-34	0.75	0.76	0.53	0.68	7.4	5	11	8	12	
1923...	22.2	62	-36	0.38	0.35	0.23	0.32	3.6	3	16	8	7	
1924...	2.9	58	-46	0.40	0.39	0.54	0.44	5.3	4	12	7	12	
1925...	16.5	67	-38	0.24	0.30	0.30	0.28	2.6	3	12	8	11	
1926...	9.2	55	-36	0.60	0.50	0.59	0.56	5.5	3	14	8	9	
1927...	1.8	43	-38	0.96	0.52	0.91	0.80	8.7	5	14	7	10	
1928...	20.7	57	-30	0.47	0.23	0.27	0.32	3.2	3	14	7	10	
1929...	12.5	59	-38	0.68	0.88	0.88	0.81	9.9	5	12	8	11	
1930...	19.9	53	-30	0.21	0.16	0.21	0.19	2.0	3	12	8	11	
1931...	21.0	58	-21	0.25	0.15	0.29	0.23	2.7	2	13	8	10	
1932...	12.4	60	-31	0.17	0.14	0.28	0.20	1.7	3	14	10	7	
1933...	8.6	62	-38	1.09	0.79	0.83	0.90	9.7	6	9	8	14	
1934...	12.6	53	-44	0.40	0.22	0.29	0.30	3.9	5	9	8	14	
1935...	12.6	51	-34	0.65	0.52	0.34	0.50	5.6	5	10	7	14	
1936...	15.0	59	-36	0.50	0.32	0.46	0.43	5.5	4	11	8	12	
1937...	11.4	51	-33	0.62	0.51	0.49	0.54	6.5	6	10	9	12	
1938...	18.2	55	-41	0.40	0.30	0.26	0.32	4.1	4	11	10	10	
1939...	26.7	70	-20	0.27	0.30	0.27	0.28	2.3	4	10	10	11	
1940...	19.8	59	-36	0.79	0.28	0.19	0.42	4.0	4	10	7	14	
1941...	22.5	66	-20	0.15	0.17	0.14	0.15	1.8	3	10	11	10	
1942...	10.9	53	-30	0.67	0.52	0.39	0.53	7.1	7	7	8	16	
Period	13.3	72	-50	0.55	0.45	0.45	0.48	5.1	4	12	8	11	

Natural History Library

Climatological Data for December 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With oil in, or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	46	8.4	-4.4	36	16†	-25	20	0.54	0.00	0.21	25	7.6	3	14	8	9	n.	C. Hayford.
Cavalier	Pembina	894	32	4.7	.....	33	23	-25	20	1.01	+0.17	0.53	17	11.9	5	12	10	9	nw.	City Light & Power Co.
Colgate	Steele	1,180	9	.....	.....	.....	.....	.....	.....	0.59	.....	0.21	25	6.2	4	2	14	15	nw.	M. H. Badger.
Cooperstown	Griggs	1,428	45	7.5	-5.5	33	16†	-23	20	0.45	-0.11	0.19	9	8.2	4	3	9	19	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	12	.....	.....	.....	.....	.....	.....	0.54	-0.11	0.19	9	8.0	3	1	12	18	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	45	6.0	-3.5	32	28	-20	12	0.55	+0.01	0.13	25	8.8	9	2	7	22	nw.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	41	10.0	-5.0	39	23	-23	20	0.60	+0.20	0.25	25	9.5	7	2	13	16	se.	O. A. Thompson.
Edmore	Ramsey	1,524	18	4.0	-6.5	32	23	-29	20	0.33	-0.25	0.16	17	6.6	5	7	7	17	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	12.6	-3.7	35	16†	-23	20	0.71	+0.25	0.24	25	9.3	6	4	4	23	se.	J. E. Demmer.
Fargo	Cass	895	15	7.6	-3.9	33	17	-25	13	0.65	-0.07	0.17	25	9.2	15	4	7	20	uw.	U. S. Weather Bureau.
Forman	Sargent	1,249	49	11.7	-3.6	32	17†	-22	20	0.99	+0.43	0.50	25	10.2	5	10	9	12	nw.	Helge Dyste.
Fullerton	Dickey	1,439	44	12.5	-2.7	40	23	-24	20	1.30	+0.45	0.42	25	13.2	6	6	3	22	nw.	F. O. Alin.
Grafton	Walsh	827	50	6.0	-4.7	32	23	-28	20	0.73	+0.19	0.40	17	9.2	4	11	14	6	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	830	51	5.8	-5.2	31	23	-28	20	1.15	+0.55	0.57	17	13.3	11	6	9	16	nw.	University of N. Dak.
Grand Forks Airport	Grand Forks	833	2	4.4	.....	32	23	-28	20	0.89	.....	0.25	16	14.2	13	5	8	18	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	13	8.5	-9.2	38	15†	-21	20	0.63	+0.15	0.23	20	11.0	5	5	11	15	nw.	Joseph Rindt.
Hannah	Cavalier	1,568	50	3.1	-4.5	27	16†	-28	20	0.81	+0.19	0.41	17	8.4	5	9	5	17	nw.	A. E. Prior.
Hillsboro	Trails	901	42	8.0	0.0	34	16	-24	13	0.78	+0.12	0.26	17†	14.6	5	4	15	12	nw.	Alfred Jahnke.
Jamestown	Stutsman	1,457	50	11.0	-2.9	38	14	-19	12	0.47	-0.19	0.20	9†	5.3	3	15	1	15	se.	N. Dak. State Hospital.
Jamestown Airport	Stutsman	1,494	2	9.0	.....	37	14†	-23	12	0.32	.....	0.12	9	5.9	7	3	8	20	nw.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	3	9.2	.....	36	15†	-25	12	0.49	.....	0.18	9	6.4	6	5	12	14	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	46	4.7	-4.1	27	21†	-24	12	1.07	+0.44	0.38	17	10.7	15	5	8	18	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	49	6.5	-5.0	33	23	-23	13†	0.80	+0.23	0.42	25	10.8	6	11	2	18	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	38	11.2	-3.6	35	15†	-25	20	0.77	+0.29	0.40	25	9.4	5	10	1	20	nw.	J. O. Halverson.
Mayville	Trails	975	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. B. Addicott.
McHenry (near)	Eddy	1,509	20	6.2	-4.6	33	16	-23	20	0.29	-0.21	0.10	19	3.5	8	5	8	18	nw.	C. E. Blasky.
McLeod	Ransom	1,075	31	10.0	-5.1	36	17	-25	20	0.27	-0.21	0.14	19	2.7	3	7	12	12	nw.	J. G. Carlson.
McVie	Nelson	1,467	12	.....	.....	.....	.....	.....	.....	0.62	.....	0.13	19	9.4	7	6	13	12	nw.	A. M. Casad.
Milnor	Sargent	1,117	3	6.2	.....	30	21†	-25	20	0.49	.....	0.37	25	8.0	2	14	12	5	nw.	E. W. Wilson.
Oakes	Dickey	1,318	13	12.0	-4.2	38	17	-26	20	0.63	+0.19	0.19	25	7.2	4	7	5	19	uw.	F. H. Murray.
Park River	Walsh	998	38	4.0	-7.1	31	23	-26	20	0.84	+0.41	0.69	17	10.5	3	11	7	13	nw.	E. J. Taintor.
Pembina	Pembina	789	68	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. W. Douglas.
Pembina Airport	Pembina	795	3	3.2	-3.8	29	23	-22	20	0.84	+0.20	0.20	17	9.8	13	5	8	18	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	12	.....	.....	.....	.....	.....	.....	0.54	+0.04	0.23	17	8.4	6	9	9	13	nw.	T. M. Rykken.
Sharon	Steele	1,516	18	5.8	-6.4	34	16	-21	12	0.52	+0.06	0.12	25	6.3	12	3	12	16	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,245	36	10.5	-4.0	35	15	-22	20	0.52	+0.04	0.18	18†	10.2	7	6	6	19	ne.	I. C. Robertson.
Wahpeton	Richland	962	50	9.6	-6.2	33	16†	-21	13	0.60	+0.14	0.20	25	8.7	8	6	6	19	nw.	W. J. Cavanaugh.
Average for Eastern Division				7.7	-4.9	40	23	-29	20	0.67	+0.12	0.69	17	8.9	7	7	8	16	nw.	.....
Middle Division																				
Ashley	McIntosh	2,014	46	11.8	-3.0	40	16†	-21	20	0.38	-0.18	0.11	19	5.6	9	4	10	17	nw.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peavey Elevator Co.
Bisbee	Towner	1,601	39	8.5	-1.2	34	28	-22	20	1.00	+0.58	0.43	16	10.0	4	10	9	12	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	68	14.8	-0.9	41	17	-16	27	0.57	+0.05	0.16	9	8.6	7	6	4	21	e.	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	3	12.6	-0.2	41	17	-19	20	0.48	-0.19	0.16	9	6.9	7	6	4	21	e.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	50	4.4	-3.9	30	28	-22	21	0.66	+0.19	0.20	19	7.0	6	5	7	19	se.	N. D. School of Forestry
Carrington	Foster	1,579	44	7.6	-5.0	35	14†	-22	12	0.63	+0.24	0.20	25	13.9	9	8	14	9	ne.	Soo Line Agent.
Carson	Grant	2,500	30	16.4	-0.2	52	28	-17	2	0.58	+0.07	0.21	25	6.9	6	7	6	18	s.	J. W. Evans.
Center	Oliver	2,100	4	18.0	.....	43	28	-20	20	0.52	.....	0.12	9	8.4	8	1	11	19	nw.	Fred L. Heinz.
Dogden Butte II	McLean	1,880	16	10.7	-4.1	38	21	-18	12	0.57	+0.09	0.24	9	6.0	3	6	7	18	s.	R. L. Williams.
Drake	McHenry	1,634	13	7.8	-7.6	39	28	-21	12†	0.44	+0.15	0.11	25	5.2	9	5	4	22	s.	H. G. Kringen.
Dunseith	Rolette	1,682	46	6.2	-4.1	30	16†	-19	12	0.62	+0.20	0.20	17	7.0	8	5	13	13	se.	Geo. Gehres.
Eckman	Bottineau	1,500	37	6.2	-4.1	42	28	-30	12	0.87	+0.39	0.21	25	9.7	9	6	8	17	se.	E. R. Sherman.
Energy II	McLean	1,750	27	14.3	-1.9	49	28	-18	11	0.38	-0.07	0.12	19	5.0	5	5	11	15	e.	H. S. Solenberger.
Fessenden	Wells	1,610	30	9.2	-2.6	36	17	-21	12	1.03	+0.43	0.46	19	14.9	6	11	8	12	n.	John V. Zuber.
Fort Yates	Sioux	1,670	42	16.2	-3.0	44	23	-18	27	0.15	-0.27	0.08	31	2.0	2	13	4	14	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	21	9.4	-4.8	43	28	-20	12	0.65	+0.14	0.19	9	7.0	9	5	7	19	se.	E. C. Bierbaum.
Gackle	Logan	1,951	12	11.6	.....	36	21	-17	12	0.73	+0.28	0.18	9†	7.6	5	0	3	28	nw.	A. H. Haut.
Garrison	McLean	1,925	65	10.9	-3.5	43	28	-16	11	0.61	+0.12	0.17	9	6.5	8	3	15	13	nw.	E. L. Vorachek.
Granville	McHenry	1,504	35	9.2	-3.8	45	28	-25	12	0.36	-0.11	0.09	18†	4.6	6	10	7	14	nw.	Fred Roble.
Hansboro	Towner	1,597	34	4.6	-4.6	31	16†	-25	20	0.43	-0.16	0.21	17	9.2	8	7	12	12	nw.	W. E. Disher.
Harvey	Wells	1,596	39	.....	.....	.....	.....	.....	.....	0.39	-0.17	0.10	9	5.5	7	4	10	17	n.	Orville Hokschi.
Leeds	Benson	1,515	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Dulmage.
Linton	Emmons	1,711	25	14.2	-1.1	42	17	-18	27	0.41	+0.03	0.20	19	7.0	8	9	3	19	se.	Wm. Heyerman.
Maddock	Benson	1,604	27	7.5	-3.9	33	15†	-25	12	0.38	+0.04	0.12	9	4.3	5	4	14	13	nw.	A. T. Felland.
Mandan	Morton	1,750	28	12.0	-3.1	42	16	-15	20	0.37	-0.10	0.15	td							

Climatological Data for December 1942

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha	Golden Valley	15	15	20.8	+1.7	48	17	-12	2	0.35	-0.15	0.13	11	5.9	7	19	7	5	w.	H. A. Bury.
Amidon	Slope	2,908	19	20.8	.....	48	28	-16	2	0.23	-0.18	0.10	11	3.8	7	6	9	16	w.	Stanley W. Bale.
Beach	Golden Valley	2,759	36	19.8	+1.4	48	28	-16	2	0.45	-0.05	0.18	9	4.5	5	3	14	14	nw.	Mrs. H. Russell.
Berthold Agency H.	McLeau	2,062	48	15.1	-0.8	40	28	-16	2	0.44	+0.05	0.19	9	7.0	7	11	14	6	nw.	H. W. Case.
Bowbells	Burke	1,958	13	7.6	-5.0	41	28	-20	12	0.40	0.00	0.14	17	4.0	8	3	4	24	w.	Charles Kaufman.
Bowman	Bowman	2,872	27	19.9	+2.3	48	28	-17	2	0.53	+0.17	0.12	12	5.4	6	16	4	11	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	33	10.9	-2.0	38	14	-18	11	0.69	+0.18	0.10	8	7.2	14	5	5	21	nw.	J. H. Phelps.
Dickinson	Stark	2,543	49	14.8	-2.0	50	28	-18	2	0.32	-0.18	0.07	11	6.0	12	4	12	15	sw.	Leroy Moomaw.
Dickinson Airport	Stark	2,577	2	18.1	.....	48	28	-14	2	0.32	.....	0.08	31	7.6	8	3	7	21	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	42	15.4	-2.6	47	28	-17	10	0.43	-0.03	0.17	9	5.0	3	4	8	19	nw.	O. T. Evenson.
Epping	Williams	2,224	31	13.1	-2.1	43	28	-17	9	0.37	-0.08	0.11	16	8.5	4	7	11	13	se.	T. Beachler.
Fairfield	Billings	5	5	19.2	.....	52	28	-15	2	0.33	-0.04	0.15	19	3.7	3	9	10	12	se.	Mrs. Edith Larson.
Fryburg	Billings	2,790	23	19.2	.....	52	28	-15	2	0.57	+0.06	0.19	31	6.0	7	3	9	19	nw.	Verne King.
Golya	Golden Valley	2,781	2	19.0	.....	49	28	-20	2	0.27	.....	0.13	11	3.8	7	3	13	15	w.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	2	.....	.....	.....	.....	.....	.....	0.21	.....	0.12	9	3.0	3	14	12	5	w.	L. E. Boe.
Hettinger	Adams	2,675	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. A. Springer.
Kenmare	Ward	1,799	10	9.1	.....	42	28	-16	11	0.35	-0.11	0.10	18	5.3	10	12	7	12	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	32	21.4	+2.9	49	17	-18	2	0.25	-0.16	0.15	11	2.8	4	10	11	10	nw.	S. P. Grano.
Mary	McKenzie	13	13	.....	.....	.....	.....	.....	.....	0.28	-0.12	0.14	11	6.9	4	3	12	16	nw.	Fred Hartman.
Medora	Billings	2,271	26	.....	.....	.....	.....	.....	.....	0.43	-0.09	0.19	11	5.8	4	9	12	10	nw.	Ovide E. Grenier.
Mott	Hettinger	2,424	34	20.0	+4.2	52	28	-18	2	0.12	-0.48	0.10	11	1.2	2	10	11	10	nw.	P. G. Wick.
New England	Hettinger	2,400	47	18.6	+1.2	53	28	-17	2	0.54	+0.13	0.14	11	7.3	6	3	14	14	nw.	F. S. Sleight.
New Hradec	Dunn	1	1	17.6	.....	46	28	-18	2	0.42	.....	0.09	25	4.3	8	13	4	14	sw.	Peter F. Fieck.
Parshall	Mountrail	1,929	26	8.8	.....	45	28	-23	11	0.19	-0.21	0.05	8	3.4	8	7	18	7	se.	C. E. Shubert.
Portal	Burke	1,954	36	6.7	-5.9	37	28	-25	11	0.34	-0.13	0.12	31	5.9	5	3	7	21	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	36	9.2	-6.6	37	13	-15	9	0.47	-0.09	0.13	14	9.0	5	6	12	13	e.	Geo. B. Gee.
Richardton	Stark	2,467	25	18.4	+2.2	49	28	-12	2	0.58	+0.19	0.15	9	7.3	9	5	11	15	se.	Assumption Abbey.
Sanish	Mountrail	1,835	16	10.2	-3.3	47	28	-18	11	0.37	-0.13	0.10	25	3.6	6	0	18	13	.....	H. J. Bugge.
Stanley	Mountrail	2,258	4	9.8	.....	41	28	-17	2	0.43	.....	0.13	15	6.4	5	3	13	15	nw.	Leroy Edwards.
Tioga	Williams	2,279	13	.....	.....	.....	.....	.....	.....	0.21	-0.29	0.11	18	2.2	2	5	5	21	nw.	B. V. Olson.
Trotters	Golden Valley	16	16	.....	.....	.....	.....	.....	.....	0.53	+0.13	0.13	9	5.3	9	1	19	11	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	2	12.9	.....	49	28	-19	11	0.34	.....	0.08	25	6.7	7	12	13	6	nw.	Soil Conservation Serv.
Watford City	McKenzie	2,084	28	16.7	+1.4	49	28	-17	10	0.68	+0.14	0.14	19	8.0	9	1	19	11	w.	J. C. Zeller.
Willrose	Williams	2,254	14	.....	.....	.....	.....	.....	.....	0.32	-0.18	0.07	15	5.0	9	7	8	16	se.	L. Holter.
Williston	Williams	1,878	62	14.4	+0.6	43	22	-18	10	0.54	-0.04	0.14	19	6.1	11	5	7	19	se.	U. S. Weather Bureau.
Average for Western Division				14.9	-0.9	53	28	-25	11	0.39	-0.06	0.19	9	5.4	7	7	10	14	nw.	.....
Average for the State				10.9	-2.4	53	28	-30	12	0.53	+0.05	0.69	17	7.1	7	7	8	16	nw.	.....

Daily Temperatures for December 1942

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley ³	Maximum...	12	10	20	24	20	26	18	21	18	17	14	15	30	36	34	40	40	13	4	20	36	33	36	14	25	25	19	27	29	13	20	22.9	
	Minimum...	-8	-12	3	3	0	0	4	5	9	-6	-10	-13	-9	12	14	18	6	-1	-13	-21	14	4	2	4	13	-3	-15	8	8	0	10	0.8	
Beach	Maximum...	13	14	12	15	15	20	18	25	23	20	28	36	43	46	40	42	46	22	19	38	43	42	40	24	44	32	31	48	36	36	35	30.5	
	Minimum...	-7	-16	1	-2	-2	-10	-2	-4	9	-8	8	8	23	25	22	25	15	0	9	13	28	19	19	9	12	12	7	7	17	17	20	9.0	
Bismarck Airport ¹	Maximum...	10	12	19	25	22	23	17	19	19	16	10	10	34	40	33	40	41	14	7	22	39	37	34	16	25	27	22	32	32	14	21	23.3	
	Minimum...	-5	-12	7	3	1	4	3	1	11	-13	-16	0	-1	15	10	19	11	0	-18	-19	10	2	6	3	14	-9	-18	14	10	9	13	1.1	
Bottineau	Maximum...	-5	-6	15	12	15	15	15	15	8	6	6	5	20	22	25	28	10	10	5	18	25	22	15	18	12	17	30	18	5	5	14.1		
	Minimum...	-13	-22	-20	5	5	-12	-2	7	-3	0	-21	-22	-20	1	8	8	5	-14	-12	-16	-4	-5	-4	-15	-6	-9	-14	11	15	-7	-6	-5.3	
Carson	Maximum...	12	15	17	26	22	22	15	22	22	19	18	13	37	39	39	38	31	18	8	22	43	40	39	18	27	27	42	52	38	20	28	26.9	
	Minimum...	-5	-17	3	0	-2	-6	3	7	9	-1	-10	10	11	18	19	20	13	0	2	-5	11	12	16	9	9	2	14	15	17	10	16	6.0	
Crosby	Maximum...	5	9	18	19	18	19	10	12	14	13	16	16	18	38	36	35	38	11	3	26	38	34	33	20	26	25	27	37	25	17	18	21.7	
	Minimum...	-7	-14	6	7	0	0	-3	-6	4	-7	-18	-7	6	17	5	17	3	7	-4	-15	11	-4	-3	-12	13	-5	-5	23	6	4	7	0.1	
Devils Lake ¹	Maximum...	2	9	15	18	16	20	22	14	8	6	3	-2	25	28	20	30	27	-2	-4	13	31	29	31	4	22	24	-13	32	17	0	1	3.5	
	Minimum...	-8	-14	1	9	-1	-5	-2	1	4	-7	-15	-20	-16	11	-1	20	2	-8	-18	-18	6	3	-6	-12	4	-7	-11	11	-6	-8	-1	-15.6	
Dickinson Airport ³	Maximum...	5	16	17	19	20	22	15	22	21	15	23	25	41	40	36	46	40	16	12	28	43	39	38	21	39	24	28	48	33	30	30	27.5	
	Minimum...	-12	-14	4	1	0	-4	0	-7	-3	-13	-4	18	19	21	23	27	14	0	5	9	26	19	15	15	17	1	2	24	19	19	21	8.7	
Dunn Center	Maximum...	16	11	17	20	20	23	16	18	20	18	18	20	40	40	39	38	45	17	10	29	44	39	35	21	34	30	29	47	31	23	25	26.9	
	Minimum...	-4	-14	3	6	1	-7	-4	7	1	-17	-13	9	13	23	19	22	12	-2	1	-13	20	8	18	2	5	-11	-13	21	15	12	15	3.9	
Fargo ¹	Maximum...	4	12	18	23	20	22	21	20	20	18	8	9	21	25	27	28	32	33	7	0	15	29	20	25	11	27	28	6	18	17	5	11	17.8
	Minimum...	-7	-10	7	3	2	-2	4	10	10	-3	-9	-21	-25	10	7	15	-2	-8	-18	-24	14	5	2	-5	11	-1	-16	-2	-6	-14	-2	-2.5	
Fessenden	Maximum...	10	10	16	20	17	18	21	21	18	13	3	-2	27	34	34	33	36	10	-3	18	26	29	34	15	21	25	20	33	22	7	10	19.4	
	Minimum...	-5	-15	0	10	2	-2	-2	12	5	-5	-8	-21	-18	11	1	14	5	-9	-8	-20	13	-1	11	-7	1	3	-11	7	6	-4	-1	-1.0	
Fullerton	Maximum...	18	14	21	26	21	22	20	20	20	12	7	20	33	36	33	35	39	10	-4	11	35	35	40	18	25	27	14	22	23	16	16	21.9	
	Minimum...	-8	-8	2	11	6	4	4	17	10	6	-4	-14	-10	12	11	17	9	2	-3	-24	11	2	17	0	8	14	-12	-8	16	-2	2	3.1	
Garrison ³	Maximum...	4	12	18	22	19	20	19	16	15	10	10	15	31	38	25	37	13	9	3	23	38	35	28	12	25	23	23	43	22	12	19	20.7	
	Minimum...	-9	-13	5	10	0	2	2	5	6	-13	-16	-11	3	19	9	20	9	-5	-14	-15	15	0	-1	-5	10	-7	-10	20	10	5	4	1.1	
Grafton	Maximum...	-7	9	20	20	21	19	28	17	11	8	7	3	9	24	21	25	26	6	-4	0	26	25	32	25	21	26	16	19	19	2	6	15.9	
	Minimum...	-2	-10	5	11	2	0	-5	2	-3	1	-2	-15	-24	8	2	7	5	-11	-15	-28	0	5	11	-13	-5	3	-20	10	1	-14	-5	-3.8	
Grand Forks Airport ³	Maximum...	4	11	19	20	20	20	22	15	12	9	7	-3	24	22	20	29	28	0	-6	11	25	17	32	4	25	26	4	16	14	3	8	14.8	
	Minimum...	-5	-9	6	9	0	-5	-6	3	3	-8	-14	-23	-25	8	0	14	0	-13	-24	-28	8	3	-4	-11	0	-10	-21	-3	-14	-18	-6	-6	-6.1
Jamestown Airport ³	Maximum...	7	11	20	24	20	24	18	20	15	12	7	3	28	37	27	32	36	9	0	20	34	29	37	9	25	25	12	24	19	4	14	19.4	
	Minimum...	-7	-10	4	9	-1	0	5	10	8	-6	-17	-23	-19	7	7	19	6	-5	-20	-22	15	2	0	-4	9	2	-16	3	4	-4	-1	-1.5	
Kenmare	Maximum...	2	12	18	20	11	23	15	10	10	4	18	18	37	38	35	38	10	2	7	34	37	38	13	13	17	12	27	42	20	8	11	19.7	
	Minimum...	-5	-13	9	9	0	-4	-2	-5	3	0	-16	-15	12	16	8	11	9	-5	-11	-16	7	1	0	-8	-5	4	-5	16	-2	-4	-1	-1.5	
Langdon	Maximum...	3	6	18	16	18	19	18	17	5	6	10	6	11	24	22	26	24	5	-6	6	27	19	26	15	18	23	11	27	25	0	10	14.7	
	Minimum...	-7	-13	1	7	-7	-7	-1	2	-6	-1	-15	-21	-18	8	-8	6	3	-14	-15	-20	5	7	9	-17	7	10	-15	1	-1	-20	-5	-5.3	
Marmarth	Maximum...	10	23	20	17	22	20	20	27	28	28	33	36	43	43	40	46	49	25	24	42	46	39	42	26	43	30	30	46	38	28	42	32.5	
	Minimum...	-3	-18	-7	-10	-2	-17	-15	-10	8	2	17	27	20	20	28	24	24	5	12	20	25	21	22	20	20	10	0	26	15	13	21	10.3	
Minot ³	Maximum...	1	11	20	20	13	20	16	13	11	9	8	4	33	37	34	37	26	5	1	24	37	38	38	12	26	23	26	43	28	8	10	20.4	
	Minimum...	-11	-15	4	7	2	-2	4	5	4	-12	-17	-17	11	14	7	22	-2	-11	-18	-19	12	-1	-4	-9	7	-5	8	17	-2	-3	-5	-1.9	
Mott	Maximum...	21	17	18	23	24	25	20	25	28	24	22	27	41	43	42	43	47	22	13	27	46	43	43	33	38	36	37	52	50	31	29	31.9	
	Minimum...	-1	-18	6	-4	-2	-10	-3	-8	11	-9	0	12	17	15	23	18	3	7	21	13	22	14	17	12	-10	22	23	18	22	8	2	8.2	
Pembina Airport ³	Maximum...	2	12	18	19	19	18	17	13	6	8	2	-6	20	24	16	23	18	-2	-8	9	25	12	29	6	25	25	3	16	15	3	12	15.5	
	Minimum...	-4	-10	7	9	6	-1	-6	-3	-15	1	-12	-18	-21	-12	-4	11	-3	-17	-16	-22	4	-2	-6	-15	-4	-8	-18	0	-11	-11	-19	-6.2	
Sharon	Maximum...	6	9	18	21	19	23	20	21	7	6	5	2	18	25	24	34	30	4	-5	8	28	24	31	7	20	24	10	22	18	1	8	15.7	
	Minimum...	-7	-14	-1	7	1	-7	-1	4	1	-8	-7	-21	-17	-10	-1	11	0	-13	-14	-18	5	1	6	-9	-4	3	-15	0	1	-13	-3	-4	0
Steele	Maximum...	13	10	18	23	20	26	17	21	17	13	7	8	22	35	33	33	36	9	0	19	37	31	17	24	24	20	29	21	15	18	20.9		
	Minimum...	-5	-18	1	-1	-1	3	0	8	5	-5	-20	-23	-12	8	6	17	7	-5	-7	-19	9	-5	14	-6	6	-8	-18	8	12	1	4	-1	0.9
Valley City	Maximum...	15	12	19	21	21	22	19	24	22	14	10	18	30	35	34	32	9	8	12	33	33	34	25	21	27	15	22	20	17	13	20.9		
	Minimum...	-1	-8	5	4	14	6	2	7	10	0	-4	-19	-20	10	7	15	8	-2	-5	-22	-5	-1	14	-4	3	15	-16	-12	7	-5	-1	0.1	
Wahpeton	Maximum...	17	10	21	25	24	22	24	24	22	22	7	6	15	26	26	33	33	9	2	32	32	32	32	20	25	30	22	17	17	17	12	20.4	
	Minimum...	-2	-11	-1	9	0	-4	1	18	16	4	-4	-17	-21	12	8	9	7	-4	-11	-18	5	0	9	-3	0	20	-17	-18	8	-16	-2	-1	-3.3
Williston ¹	Maximum...	4	10	20	15	15	15	15	18	15	18	4	20	22	38	39	36																	

Daily Precipitation for December 1942

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total			
Eastern Division																																				
Casselton	Red.									T.	.04	.13									.20												0.54			
Cooperstown ²	Sheyenne	T.								T.	.07	T.		T.				.15	T.	.19							T.						0.45			
Courtenay	James									.19	.09	T.														.18								0.54		
Devils Lake ¹	Devils Lake	T.	T.	T.	.01	T.		T.		.01	.09	T.	T.	T.	T.		.06	.06	.04	T.	.17	.12	T.	T.	T.		.13	T.	T.	T.	T.			0.55		
Edgeley	James							.01				.03						.14	.02		.14					.25					.01			0.60		
Edmore	Devils Lake									.01		.09	T.					.16									.04							0.33		
Ellendale	James									.01		.01						.13			.18		.01	.02	.01	.24					.14	T.		.03	0.71	
Fargo ¹	Red.	.01	T.	T.	T.	T.	T.	T.		.01	.05	.03	.01	T.	T.		T.	.11	.05	T.	.14					.17	.01							0.65		
Forman	Sheyenne									.01		.01						.40								.50					.01	.01	T.	0.99		
Fullerton	James	T.		T.		T.		T.		T.	.05	T.	T.				.14	.30			.28					.42					.07		T.	1.30		
Grafton	Red.		T.	T.	T.	T.				T.		.18	.04	T.				.40	.13	T.	.05	.02	T.	T.		T.	.09					.11	T.	.06	0.73	
Grand Forks Airport ³	do	.06	T.	T.	T.	T.				.02	.07	.04	T.		T.	.09	T.	.25	.13	T.						T.	.10	.01				.04	.01	0.89		
Hankinson ²	do																					.23	T.			.10	.10	.14			.02		T.	0.61		
Haunah	Pembina	T.	T.	T.	T.					T.	.22					T.	T.	T.	.41								.05						.05	0.81		
Hillsboro	Red.									.01	T.	.13						T.	.26	T.	.12					.26								0.78		
Jamestown Airport ³	James	T.		T.	T.	T.				T.	.12	.02	.01			T.	T.	.02	T.	.05	T.	T.				T.	.09	T.			T.			0.32		
Langdon	Pembina	.01			.01					.04	.01	.24	.01			.01		.01	.38	.03	.03		.05	.01	T.		.08						.15	1.07		
Larimore	Red.	T.		T.	T.					.02	.06	.09						.18			T.					.42							.03	0.80		
Lisbon	Sheyenne											.09						.02			.20					.40					.06		T.	0.77		
Mayville	Red.																																			
McHenry	James			T.	T.	T.				.02	.02	.03						.01	.05	.08	.10	T.				.03								0.29		
McLeod	Sheyenne	T.								T.											.17	T.				.03								0.27		
Oakes	James									T.	T.		T.					.15								.19								0.63		
Park River	Red.					T.				T.	T.	.07	T.					.69	T.							.08							T.	0.84		
Pembina Airport	do	T.	T.	.01	.02					.04	T.	.12	T.		.02	T.	T.	.11	.20	T.				.01	.02		.11	T.			.01	.06	T.	1.11	0.84	
Petersburg	do									T.	.02	.10						.23								.08								0.54		
Sharon	do	.01		T.	.01	T.				.01	.06	.07			T.	T.		.02	.09	.01	.07	.01				.08								0.52		
Valley City	Sheyenne						T.	T.		T.	.04	.03	T.					.05	.03	.01	.18					.18								0.52		
Wahpeton	Red.	T.				T.				T.							.02	.01	.01	.10			T.			.20	T.				.04			0.60		
Middle Division																																				
Ashley ³	Missouri	.03		T.	T.	T.	T.	T.		T.	T.				T.		.01	.02	T.	T.	.11					.06	.08	T.						0.38		
Hisbee	Devils Lake									.09	.15	T.						.43	T.	T.	T.	.13	T.			.08	.02	T.						1.00		
Bismarck ¹	Missouri	T.		.02	T.	T.	T.	T.		T.	.10	T.	T.	T.	T.		T.	.03	T.	T.	T.	.20					.09							0.46		
Bottineau ²	Mouse									T.																								0.66		
Carrington	James	.02	T.	T.	.02					T.	.02	.13						.03	.02	.07			.08				.20					.04		0.63		
Carson	Heart									T.								.05									.21					.09		0.58		
Center	Missouri	T.		T.				T.		T.	.12		.01				.01	.05	T.	.10	.07												.05	0.52		
Dogden Butte	Mouse	T.		T.	T.	T.				T.	.24							T.	T.	.20	.13	T.			.11	T.								0.57		
Drake ²	do									.02	.02	.10						.06	T.	.06	.02	.04					.11						.01	T.	0.44	
Dunseith	do	T.		T.	T.	.01				.02	T.	.07						.06	.20	.09							.11	T.						.06	0.62	
Eckman	do	T.						T.		.03	.05	.09					T.	.10	.01	.03	.20					.21						.15		T.	0.87	
Energy	Missouri										.07							.05	T.		.12					.07								.07	0.38	
Fessenden	James									.03	.10	.06						.30			.46												.08	1.03		
Fort Yates	Missouri	T.																T.		.07														.08	0.15	
Foxholm (near)	Mouse	T.		T.	T.			T.		.12	.19						.01	.09	.02	.10	.04					.06								.02	T.	0.65
Gackle	James									.18	.18	T.						.18	.05		.16						.16								0.73	
Garrison ³	Missouri									.02	.17				T.			.05	.02	T.	.14				.10	.03								T.	0.66	
Granville	Mouse	T.		T.		T.				T.	.02	.07	T.				.02		T.	.09	.07					.09								T.	0.36	
Hansboro	Devils Lake									.04	.06	.03						.03	.21		T.			T.	T.	.01	.01						.03	.02	0.43	
Linton	Missouri	T.	T.	T.	T.	T.				T.	.01				T.		T.	.04	.02	.01	.20					.01	.10						T.	.02	0.41	
Maddock	Sheyenne	T.	T.	T.	T.					T.	.12						T.	.10	.05		.05					.06								T.	0.38	
Mandan ²	Missouri	T.	T.	.01						T.	.03	.15					T.	.02	T.	T.	.05	T.				.11	T.							T.	0.37	
Max ²	do		T.							.03	.01	.06					.04	.02	.03	.01	.08													.02	0.35	
McClusky	do							T.		.19											.23					.05								T.	0.50	
Minot ³	Mouse		T.	T.	.02	T.	.01			.02	.05	.07	T.		T.		T.	.06	.05	.05	T.	.09	T.	T.			.10						.03	.01	0.56	
Mohall	do	T.		.01	T.					.01	.14	.09	.02					.01	.07	.06	.01	.05					.11					.02	.09	.04	0.73	
Napoleon ²	Missouri											.05						.12	.05		.10					.07								0.39		
New Salem	Heart												.04								.01					.04									0.16	
Pettibone	James		.01	T.						.02	.10	.19						T.	T.	T.	.03			T.	T.									T.	0.35	
Rolla	Devils Lake	.02			.01					.02	.12							.29	T.	.12	.12						.13						T.	.07	0.78	
Rugby (near)	Mouse	.02		T.	T.	T.	T.	T.		T.	.10	.05	.10					.20	.20		.05	T.					.10						T.	.10	0.92	
Ryder	Missouri										.03						.10	.05	T.	.07							.05					.06			0.37	
Selfridge	do									T.	T.		T.	T.				T.	T.		.08	T.												.10	0.33	
Steele	do	T.		T.							.09	.01						.11	.02		.10														0.36	
Tagus	Mouse																																			
Towner	do									.14	.04										.50		.02	.04											0.89	
Turtle Lake	Missouri	T.								.04	.20							.04			.09						.08								0.57	
Tuttle	do			T.	T.	T.				T.	.10							.21	.05		.12						.12	T.					T.	T.	0.56	
Velva																																				

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ²Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³Data for 24 hours ending 12:30 a.m. C.S.T. ⁴Precipitation measured with recording gage. ⁵Precipitation included in the next following measurement. T, Trace, or precipitation less than 0.01 inch. [WBO, Minneapolis, 2-2 43-1000]

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LI BISMARCK, N. D., ANNUAL 1942 No. 13

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GENERAL SUMMARY

The mean temperature for the year was above normal at most stations in the state. All the winter months, except December were above normal, and all months from May through September were below normal. Only a few stations recorded readings above 100°. January was far above normal. The frost free season extended from May 14th to September 19th at most Stations, but temperatures on June 23d were below freezing at many places in western North Dakota and some of the stations reported killing frosts.

The precipitation averaged above normal with the greatest amounts in the eastern division. Precipitation was above normal in March, April, May, and August in all sections of the state and it was also above normal in June in western North Dakota.

The ideal temperature and moisture conditions made all crops produce prolifically in all sections of the state and livestock was also favored by the weather during 1942.

The average temperature for the state was 40.9°, or 1.4° above the 1892-1942 average, and 1.3° lower than the 1941 average. The highest annual temperature reported was 44.4° at Fort Yates; the lowest was 36.1° at Hannah. The absolute range in temperature was 140°, from 105° at Hettinger on August 20th to -35° at seven stations on January 3d and 7th.

The average annual precipitation for the state was 18.75 inches, or 1.72 inches above the 1892-1942 average, and 4.48 less than the average for 1941. The greatest annual precipitation reported was 33.68 inches at Ellendale; the least was 10.40 inches at Parshall. The greatest monthly amount reported was 8.48 inches at Cavalier in August. The average snowfall was 32.4 inches. The average number of days with 0.01 inch or more of precipitation was 83. There were 128 clear days, 114 partly cloudy days, and 123 cloudy days. The prevailing wind was northwest.

THE WEATHER BY MONTHS

JANUARY.—It was very cold during the first 10 days of January but unusually mild thereafter. No subzero temperatures had occurred after the 10th, a record never before equalled in the climatological history of North Dakota. The precipitation was the least recorded in any January since state-wide records began. Due to the unusually mild weather livestock were in very good condition.

FEBRUARY.—This was a mild, pleasant month. The precipitation was light but it occurred on many days. The western section received more than three times as much precipitation as the eastern section. The wind velocity was below normal and the only severe storm occurred on the 16-17th. Livestock were in much better than average condition for the season.

MARCH.—Except for the cold stormy weather from the 25th to the 30th, March was a pleasant month. Precipitation was

mostly light until the 25th when heavy precipitation began and continued until the 29th. This moisture was mostly in the form of rain in the Red River Valley, but heavy snow fell in all other sections. Highways were blocked and considerable damage occurred to telephone and telegraph lines. The precipitation in the eastern section was the greatest ever recorded in March, and for the state it was the second highest. High winds occurred on the 10th and from the 25th to the 28th.

APRIL.—Temperature and precipitation were above normal in all sections of the state. Only a few stations reported subzero temperatures and minimum temperatures below freezing did not occur after the 17th at most stations. The precipitation was well distributed both geographically and throughout the month. Considerable snow fell between the 5th and 9th. Farm work was seriously delayed in some sections by wet weather and some fields and highways in the northeastern part of the state were under water during the first part of the month. Livestock were in very good condition.

MAY.—The month was cool and wet. No readings of 90° or above were reported. It was the first month since September 1941 with the average temperature below normal. The precipitation was considerably above normal in the southwest, and near normal in the northern part. Snow fell in all sections on or about the 15th. The cool, cloudy weather and frequent precipitation delayed farm work and vegetation was backward. Livestock were in very good condition.

JUNE.—June was cool and cloudy. It was unusually cool near the middle of the month and frost occurred at many places in the western section on the 23d. The precipitation averaged slightly below normal, but the western division averaged considerably above normal and several counties in the extreme southeastern part of the state were also considerably above normal. It was an excellent month for small grains, pastures and livestock, but it was too cool for corn.

JULY.—The month was cool and precipitation was near the average. It was the coolest July since 1927. No 100° temperatures occurred at any station. The precipitation was well distributed throughout the month. It was heavy in the northeastern and south-central parts, but it was light over the northwestern and extreme southeastern sections. Sunshine was below normal. There was some hail damage and a slight amount of wind damage occurred, but the month was mostly excellent for crop growth. Pastures and ranges continued excellent throughout the month.

AUGUST.—The temperature averaged near normal. Readings were slightly above freezing on the 23d and a few stations reported light frost. Precipitation was heavy in the eastern division and moderate in the central and western divisions. Basements were flooded and some crop damage resulted from excessive precipitation at Ellendale on the 26th. Precipitation was well distributed throughout the month, but the greatest amounts occurred at the beginning and near the close. Crops were mostly very good and moisture was plentiful, but the wet weather interfered with harvesting and threshing and some lodging and hail damage occurred.

SEPTEMBER.—Warm weather prevailed early in the month, but the temperature was considerably below normal during the last half. The coldest weather ever recorded in September occurred from the 26th to the 28th. The heaviest snowfall ever recorded in September occurred on the 25th and 26th. Threshing was

[Continued on page 53]

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Climatological Data for the Year 1942

Stations	Counties	Elevation, feet	Temperature (degrees Fahrenheit)						Precipitation (inches)						Number of days					Prevailing direction of wind
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	With .01 in or more precip.	Clear	Pt. cloudy	Cloudy	
Eastern Division																				
Casselton	Cass	961	47	42.3	95	Aug. 20	-25	Dec. 20	47	22.74	5.54	Aug.	0.04	Jan.	31.9	85	149	104	112	nw.
Cavalier	Pembina	894	33	39.4	95	Aug. 20	-28	Jan. 6†	33	22.96	8.48	Aug.	0.19	Oct.	44.3	73	149	80	136	nw.
Cooperstown	Griggs	1,428	46	39.6	93	Aug. 20	-28	Jan. 4†	46	21.07	4.06	June	0.07	Feb.	39.1	90	176	80	109	nw.
Devils Lake	Ramsey	1,478	46	39.2	94	Aug. 20	-27	Jan. 7	46	18.30	4.25	July	0.04	Jan.	33.9	112	68	95	202	nw.
Edgeley	LaMoure	1,568	42	42.3	94	July 17	-26	Jan. 4	42	23.44	5.94	May	0.02	Jan.	37.0	80	61	233	71	nw.
Edmore	Ramsey	1,521	18	37.7	93	Aug. 20	-30	Jan. 7	19	18.80	4.84	Aug.	T.	Nov.	32.3	68	176	120	69	nw.
Ellendale	Dickey	1,457	40	42.7	92	July 17	-27	Jan. 7	48	33.68	7.95	Aug.	0.03	Jan.	41.4	94	142	71	152	nw.
Fargo	Cass	895	62	41.8	94	July 17†	-25	Dec. 13	62	21.51	6.71	Aug.	0.07	Jan.	27.3	111	78	123	164	nw.
Forman	Sargent	1,249	6	42.7	92	Sept. 10	-25	Jan. 7†	50	26.48	6.90	May	T.	Jan. †	36.6	66	181	82	102	s.
Fullerton	Dickey	1,439	46	42.5	90	July 17	-25	Jan. 7	45	31.26	7.59	June	0.08	Jan.	48.4	84	127	118	120	nw.
Grafton	Walsh	827	51	40.6	96	Aug. 20	-28	Dec. 20	51	20.99	5.66	July	0.06	Oct.	34.1	66	119	168	78	nw.
Grand Forks	Grand Forks	830	52	40.5	95	Aug. 20	-28	Dec. 20	52	19.63	4.67	Aug.	0.13	Jan.	38.2	107	100	123	142	nw.
Grand Forks Airport	Grand Forks	833	2	39.4	95	Aug. 20	-28	Dec. 20	2	17.69	3.91	Aug.	0.09	Oct.	36.0	101	88	117	160	nw.
Hankinson	Richland	1,068	14	42.5	94	Aug. 20	-23	Jan. 7†	14	24.29	6.24	May	T.	Jan.	41.5	72	82	146	137	nw.
Hannah	Cavalier	1,568	34	36.1	90	Aug. 20	-30	Jan. 6†	51	25.10	4.45	Aug.	0.10	Feb.	43.8	70	95	149	121	nw.
Hillsboro	Trail	901	42	41.7	96	Aug. 20	-24	Jan. 7	42	18.77	5.44	Aug.	0.11	Jan.	34.3	82	106	130	129	nw.
Jamestown	Stutsman	1,457	51	42.3	95	Aug. 20	-26	Jan. 7	51	21.32	4.05	May	T.	Nov.	33.9	82	136	89	140	nw.
Jamestown Airport	Stutsman	1,494	2	40.6	94	Aug. 20	-27	Jan. 7	2	23.53	5.24	Aug.	T.	Jan.	30.7	92	74	117	174	nw.
Kensal	Stutsman	1,440	3	40.3	91	Aug. 20	-31	Jan. 7	3	25.16	5.06	May	0.03	Jan.	27.0	102	108	147	110	nw.
Langdon	Cavalier	1,615	47	38.0	92	Aug. 20	-31	Jan. 6	47	20.04	4.69	Aug.	0.12	Oct.	44.3	122	144	116	105	nw.
Larimore	Grand Forks	1,134	50	40.5	95	Aug. 20	-25	Jan. 3†	50	18.95	4.18	Aug.	T.	Jan.	33.6	77	121	70	174	nw.
Lisbon	Ransom	1,091	39	42.3	96	July 17	-25	Dec. 20	39	23.96	4.86	Aug.	T.	Jan.	34.5	91	153	52	160	nw.
Mayville	Trail	975	47	41.8	92	July 17	-24	Jan. 7	47	18.34	3.84	Aug.	0.16	Jan.	22.4	69	146	122	97	nw.
McHenry (near)	Eddy	1,509	21	38.3	93	Aug. 20	-30	Jan. 4†	21	20.54	4.59	June	0.08	Jan.	37.2	102	116	120	129	nw.
McLeod	Ransom	1,075	31	41.8	94	Aug. 20	-25	Dec. 20	32	22.82	5.30	May	T.	Jan.	26.0	73	169	107	89	sw.
Milnor	Sargent	1,117	3	41.5	94	Aug. 20	-30	Jan. 7	13	26.98	4.40	May	0.00	Jan.	32.6	60	217	105	43	nw.
Oakes	Dickey	1,318	14	41.6	94	July 17†	-26	Jan. 7†	14	25.13	4.73	May	T.	Jan.	28.6	78	157	38	170	nw.
Park River	Walsh	998	39	39.5	93	Aug. 20	-27	Jan. 6	39	15.97	5.59	July	0.03	Oct.	35.6	49	193	75	97	nw.
Pembina Airport	Pembina	795	69	38.3	95	Aug. 20	-28	Jan. 6	69	18.76	5.89	Aug.	0.10	Oct.	34.2	110	87	134	144	nw.
Sharon	Steele	1,516	16	39.7	93	Aug. 20	-26	Jan. 4†	19	21.21	4.51	July	0.04	Jan.	31.4	106	88	135	142	nw.
Valley City	Barnes	1,245	37	42.6	93	Aug. 20	-24	Jan. 6	37	23.87	7.37	Aug.	0.12	Jan.	55.5	96	150	88	127	nw.
Wahpeton	Richland	902	51	43.4	91	July 17†	-24	Jan. 7	51	25.45	6.17	Aug.	0.02	Jan.	35.0	103	142	99	124	nw.
Middle Division																				
Ashley	McIntosh	2,014	47	40.2	94	Aug. 20	-30	Jan. 7	47	26.53	5.73	June	0.02	Jan.	35.9	97	93	98	174	nw.
Bisbee	Towner	1,601	7	39.8	99	Aug. 20	-31	Jan. 7	7	13.68	2.88	Aug.	0.02	Nov.	38.1	64	159	100	106	nw.
Bismarck Airport	Burleigh	1,650	2	42.3	99	Aug. 20	-28	Jan. 7	2	18.04	4.17	July	0.04	Jan.	43.5	109	111	104	150	nw.
Bottineau	Bottineau	1,638	51	38.1	98	Aug. 20	-35	Jan. 7	51	14.10	4.18	Aug.	0.06	Oct.	28.1	79	163	62	140	nw.
Carrington	Foster	1,579	37	38.9	94	Aug. 20	-27	Jan. 3†	45	19.97	3.95	May	T.	Jan.	48.6	99	152	104	109	nw.
Carson	Grant	2,500	31	42.4	101	Aug. 20	-29	Jan. 7	31	23.40	4.40	May	0.03	Jan.	50.2	86	137	108	120	nw.
Center	Oliver	2,100	4	41.5	97	Aug. 20	-27	Jan. 7	4	21.22	4.15	May	0.14	Jan.	35.7	109	64	207	94	nw.
Dogden Butte	McLean	1,880	17	41.1	97	Aug. 20	-27	Jan. 3	17	18.66	5.12	Aug.	0.09	Jan.	34.9	81	126	91	148	nw.
Drake	McHenry	1,634	13	39.9	98	Aug. 20†	-31	Jan. 4	14	15.63	3.69	May	0.12	Jan.	26.2	101	152	66	147	w.
Dunseith	Rolette	1,682	47	38.3	93	Aug. 20	-33	Jan. 7	47	15.60	4.17	July	0.12	Nov.	28.8	88	91	180	94	se.
Energy	McLean	1,750	18	41.9	100	Aug. 20	-32	Jan. 7	31	17.62	4.00	June	T.	Jan.	36.5	62	125	157	83	nw.
Fessenden	Wells	1,610	31	40.6	96	Aug. 20	-29	Jan. 3	31	21.40	4.43	May	0.08	Jan.	54.4	86	138	134	93	n.
Fort Yates	Sioux	1,670	43	44.4	102	Aug. 20	-29	Jan. 7	43	20.19	4.72	June	T.	Jan.	27.6	65	206	78	81	nw.
Foxholm (near)	Ward	1,657	18	40.5	101	Aug. 20	-29	Jan. 3	22	11.63	2.05	Aug.	0.01	Oct.	36.3	88	92	124	149	nw.
Gackle	Logan	1,951	13	42.0	92	Aug. 20	-29	Jan. 4	13	27.23	6.04	May	0.10	Jan.	51.9	83	127	105	133	nw.
Garrison	McLean	1,901	48	40.5	100	Aug. 20	-29	Jan. 7	48	17.63	3.03	June	0.12	Nov.	49.0	93	104	145	116	nw.
Granville	McHenry	1,504	36	41.6	100	Aug. 20	-29	Jan. 3†	36	14.88	2.70	July	0.07	Feb.	29.8	82	163	90	112	nw.
Hansboro	Towner	1,597	35	37.7	94	Aug. 20	-30	Jan. 7	35	14.65	4.68	July	0.09	Feb.	29.2	74	144	116	105	nw.
Leeds	Benson	1,515	3																	
Linton	Emmons	1,711	25	43.4	100	Aug. 20	-35	Jan. 7	26	20.52	4.75	May	T.	Jan.	34.1	90	143	89	133	nw.
Maddock	Benson	1,604	28	40.5	97	Aug. 20	-30	Jan. 3	28	15.60	3.56	July	0.06	Nov.	30.1	88	106	152	107	nw.
Mandan	Morton	1,750	29	41.8	100	Aug. 20	-27	Jan. 7	29	16.96	2.84	May	T.	Jan.	35.5	85	126	34	205	nw.
Max	McLean	2,093	14	38.9	99	Aug. 20	-32	Jan. 3†	14	17.30	3.25	July	T.	Jan.	33.0	82	123	71	171	nw.
McClusky	Sheridan	1,943	18	41.3	97	Aug. 20	-35	Jan. 6	25	18.05	3.11	Aug.	0.01	Nov.	38.1	74	153	133	79	nw.
Minot	Ward	1,724	47	40.2	100	Aug. 20	-30	Jan. 3	47	13.86	3.83	July	0.11	Oct.	35.8	97	118	50	197	nw.
Mohall	Renville	1,646	49	39.4	93	Aug. 11†	-31	Jan. 3	49	15.04	2.91	June	0.15	Oct.	41.0	98	131	116	118	nw.
Napoleon	Logan	1,955	51	40.9	95	Aug. 20	-32	Jan. 7	51	22.66	6.28	May	0.12	Jan.	63.5	103	137	26	202	nw.
New Salem	Morton	2,163																		

Monthly and Annual Precipitation for the Year 1942, with Departures from the Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual			
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.		
Eastern Division																												
Casselton	0.04	-0.42	0.32	-0.18	2.69	+2.20	2.34	+0.67	4.95	+2.08	2.36	-1.35	1.84	-0.95	5.54	+2.95	1.13	-0.99	.....	.....	.....	.....	0.54	0.00	.....	.....
Cavalier	0.22	-0.45	0.42	-0.10	3.49	+2.78	1.41	+0.06	2.17	-0.23	1.22	-1.98	3.34	+0.67	8.48	+6.12	0.57	-1.69	0.19	-1.22	0.44	-0.35	1.01	+0.17	22.96	+3.78		
Colgate	0.06	-0.39	0.10	.....	3.01	.....	1.90	.....	3.66	.....	1.41	.....	.....	.....	.....	.....	0.86	.....	0.26	.....	0.20	.....	0.59	.....	.....	.....
Cooperstown	0.10	-0.39	0.07	-0.33	3.16	+2.53	2.36	+0.97	3.83	+1.23	4.06	+0.73	2.02	-0.44	2.52	-0.11	2.01	+0.19	0.38	-0.74	0.11	-0.57	0.45	-0.11	21.07	+2.96		
Courtenay	0.12	-0.52	0.20	-0.48	4.17	+3.35	1.85	+0.29	4.98	+3.24	3.46	+0.51	2.62	+0.22	2.12	+0.15	2.11	+1.13	0.29	-1.14	0.11	-0.46	0.54	-0.11	22.57	+6.48		
Devils Lake	0.04	-0.43	0.23	-0.27	2.14	+1.36	0.63	-0.89	3.01	+0.98	2.63	-0.93	4.25	+1.68	3.36	+0.88	1.15	-0.48	0.23	-1.02	0.08	-0.64	0.55	+0.01	18.30	+0.25		
Edgeley	0.02	-0.38	0.05	-0.28	2.64	+1.93	2.34	+0.57	5.94	+3.31	2.62	-1.04	1.86	-0.91	4.71	+2.24	2.03	+0.24	0.59	-0.50	0.04	-0.42	0.60	+0.20	23.44	+4.96		
Edmore	0.06	-0.45	0.11	-0.33	2.26	+1.58	1.05	-0.17	2.44	+0.52	1.91	-1.35	1.47	+1.62	4.84	+2.54	1.23	-0.57	0.20	-0.85	T	-0.70	0.33	-0.25	18.80	+1.59		
Ellendale	0.03	-0.46	0.20	-0.34	2.36	+2.05	2.36	+0.57	5.54	+2.77	6.39	+3.11	3.42	+0.68	7.95	+5.23	2.38	+0.62	1.42	+0.31	0.32	-0.30	0.71	+0.25	33.68	+14.49		
Fargo	0.07	-0.60	0.22	-0.47	1.88	+0.87	4.24	+2.06	2.19	-0.70	2.32	-1.73	0.87	-2.56	6.71	+3.82	1.27	-0.95	0.81	-0.88	0.28	-0.62	0.65	-0.07	21.51	-1.83		
Forman	T	-0.46	0.15	-0.39	2.46	+1.72	2.14	+0.27	6.90	+3.75	4.01	+0.52	1.52	-1.45	5.17	+2.39	2.06	-0.11	1.08	-0.37	-0.62	0.99	+0.43	26.48	+5.68			
Fullerton	0.08	-0.71	0.25	-0.68	3.47	+2.27	3.20	+1.06	5.54	+2.36	7.59	+3.82	1.69	-1.43	4.30	+1.77	2.43	+0.33	1.25	-0.18	0.16	-0.70	1.30	+0.45	31.26	+8.36		
Grafton	0.28	-0.21	0.19	-0.35	3.78	+3.13	1.99	+0.78	1.28	-0.89	1.49	-1.91	5.66	+3.11	4.39	+1.81	0.66	-1.68	0.06	-1.16	0.48	-0.26	0.73	+0.19	20.99	+2.56		
Grand Forks	0.13	-0.38	0.19	-0.37	2.76	+2.02	2.29	+0.67	2.58	-0.01	1.94	-1.41	2.55	-0.20	4.67	+2.03	0.79	-1.25	0.14	-1.26	0.44	-0.38	1.15	+0.55	19.63	+0.01		
Grand Forks Airport	0.18	-0.28	0.28	-0.24	2.42	.....	2.10	.....	2.07	.....	2.06	.....	2.64	.....	3.91	.....	0.72	.....	0.09	.....	0.33	.....	0.89	.....	17.69	.....	
Hankinson	T	-0.51	0.07	-0.46	2.64	+1.71	1.79	-0.36	6.24	+3.71	3.39	+0.32	1.19	-1.35	2.23	-0.03	4.56	+2.72	1.28	+0.13	0.27	-0.49	0.63	+0.15	24.29	+5.54		
Hannah	0.46	-0.26	0.10	-0.49	3.37	+3.01	1.75	+0.71	3.75	+1.63	3.50	+0.11	4.30	+1.95	4.45	+2.33	1.75	-0.45	0.40	-0.74	0.13	-0.62	0.81	+0.19	25.10	+7.37		
Hillsboro	0.11	-0.40	0.26	-0.32	2.22	+1.47	2.12	+0.28	2.86	-0.23	1.68	-1.69	1.57	-1.11	5.44	+2.71	1.41	-0.74	0.16	-1.31	0.16	-0.66	0.78	+0.12	18.77	-1.85		
Jamestown	0.08	-0.47	0.25	-0.34	1.79	+0.92	3.46	+1.88	4.05	+1.05	2.78	-0.83	0.03	-0.75	3.37	+0.68	2.22	+0.38	0.82	-0.46	-0.68	0.47	-0.19	21.32	+1.19			
Jamestown Airport	T	.....	0.04	.....	1.62	.....	3.70	.....	4.57	.....	2.92	.....	1.61	.....	5.21	.....	2.52	.....	0.75	.....	0.24	.....	0.32	.....	23.53	.....	
Kensal	0.03	-0.34	0.14	.....	2.34	.....	3.31	.....	5.06	.....	2.69	.....	3.78	.....	4.76	.....	2.04	.....	0.41	.....	0.11	.....	0.49	.....	25.16	.....	
Langdon	0.23	-0.34	0.26	-0.36	2.66	+1.86	1.02	-0.13	2.85	+0.83	1.64	-1.76	4.44	+2.07	4.69	+2.23	0.77	-1.55	0.12	-1.02	0.29	-0.53	1.07	+0.44	20.04	+1.74		
Larimore	T	-0.66	0.14	-0.44	3.49	+2.72	1.56	-0.04	2.29	-0.60	1.71	-2.15	3.18	-1.04	4.18	+1.40	0.89	-1.37	0.31	-1.25	0.40	-0.51	0.80	+0.23	18.95	-2.71		
Lisbon	T	-0.57	0.16	-0.46	2.97	+2.33	1.88	+0.07	4.78	+1.86	3.60	-0.24	1.82	-1.37	4.86	+2.18	1.76	-0.38	1.16	-0.17	0.20	-0.46	0.77	+0.29	23.96	+3.08		
Mayville	0.16	-0.24	0.27	-0.15	2.82	+2.13	1.81	+0.24	2.78	-0.18	2.02	-1.23	2.47	-0.23	3.93	+1.45	1.91	+0.40	0.25	-0.77	0.17	-0.35	0.29	-0.21	20.54	+2.93		
McHenry (near)	0.08	-0.36	0.16	-0.34	3.27	+2.62	1.48	+0.12	2.55	+0.16	1.94	-1.41	2.55	-0.20	4.67	+2.03	0.79	-1.25	0.63	-1.26	0.44	-0.38	1.15	+0.55	19.63	+0.01		
McLeod	T	-0.57	0.38	-0.23	2.33	+1.62	2.99	+1.06	5.30	+2.03	1.25	-2.76	1.59	-1.34	5.15	+2.73	1.72	-0.49	1.61	+0.13	0.23	-0.43	0.27	-0.21	22.82	+1.50		
McVie	T	.....	0.08	.....	2.32	.....	2.26	.....	4.30	.....	3.75	.....	2.30	.....	3.44	.....	2.89	.....	1.81	.....	0.29	.....	0.49	.....	26.98	.....	
Milnor	0.00	-0.48	0.12	-0.38	2.52	+1.68	1.79	-0.05	4.73	+2.43	4.50	+1.40	1.98	-0.53	4.61	+2.14	2.65	+1.35	1.41	+0.19	0.19	-0.39	0.63	+0.19	25.13	+7.55		
Oakes	T	-0.48	0.12	-0.38	2.52	+1.68	1.79	-0.05	4.73	+2.43	4.50	+1.40	1.98	-0.53	4.61	+2.14	2.65	+1.35	1.41	+0.19	0.19	-0.39	0.63	+0.19	25.13	+7.55		
Park River	0.13	-0.26	0.29	-0.11	2.35	+1.73	0.50	-0.78	1.42	-0.64	1.75	-1.64	5.59	+3.09	2.82	+0.40	0.10	-2.14	0.03	-1.25	0.15	-0.54	0.84	+0.41	15.97	-1.73		
Pembina	0.10	-0.54	0.12	-0.51	2.72	+1.91	0.48	-0.72	2.76	+0.40	3.91	+0.58	3.44	+1.09	5.59	+3.71	0.92	-1.30	-1.31	0.55	-0.26	0.54	+0.04	17.36	+1.43			
Pembina Airport	0.23	-0.41	0.31	-0.32	2.68	+1.87	0.65	-0.55	2.76	+0.40	1.15	-2.18	3.13	+0.78	5.89	+3.70	0.74	-1.48	0.10	-1.21	0.28	-0.53	0.84	+0.20	18.76	+0.27		
Petersburg	0.06	-0.40	0.05	-0.46	2.49	+1.82	1.75	+0.35	2.86	+0.60	1.75	-1.49	3.52	+0.58	5.76	+1.31	1.19	-0.45	0.08	-1.26	0.12	-0.61	0.54	+0.04	18.17	+0.63		
Sharon	0.04	-0.42	0.10	-0.26	2.90	+2.36	2.31	+0.91	4.38	+1.58	2.14	-1.62	1.41	+1.81	2.24	+0.20	1.64	-0.54	0.27	-1.09	0.16	-0.60	0.52	+0.06	21.21	+1.99		
Valley City	0.12	-0.38	0.42	-0.05	2.95	+2.28	1.89	+0.35	3.85	+1.05	2.45	-1.00	1.44	-1.37	7.37	+5.16	2.00	+0.12	0.58	-0.60	0.27	-0.42	0.52	+0.04	23.87	+5.18		
Wahpeton	0.02	-0.40	0.10	-0.39	2.44	+1.79	2.62	+0.69	5.72	+3.06	1.93	-1.78	0.79	-2.43	6.17	+3.49	3.81	+1.43	1.05	-0.52	0.20	-0.56	0.60	+0.14	25.45	+4.52		
Middle Division																												
Ashley	0.02	-0.45	0.12	-0.37	2.52	+1.73	2.11	+0.45	4.68	+2.14	5.73	+2.49	3.59	+0.76	4.90	+2.35	1.40	-0.20	0.97	-0.19	0.11	-0.51	0.38	-0.18	26.63	+8.02		
Beulah	0.12	-0.14	0.47	+0.11	1.81	+1.20	1.30	+0.40	4.47	+2.12	5.75	+1.81	3.09	+0.81	4.05	+2.14	4.61	+2.14	2.65	+1.35	1.41	+0.19	0.19	-0.39	0.63	+0.19	25.13	+7.55
Bisbee	0.06	-0.37	0.24	-0.12	1.49	+0.76	0.77	-0.37	2.47	+0.37	1.40	-2.09	2.23	-0.33	2.88	+0.41	0.75	-1.00	0.34	-0.75	0.02	-0.50	1.00	+0.58	13.38	-3.41		
Bismarck	0.06	-0.33	0.31	-0.09	1.13	+0.22	2.53	+1.40	2.64	+0.22	2.21	-0.99	3.36	+1.14	1.48	-0.30	2.39	+0.91	0.62	-0.37	0.06	-0.43	0.57	+0.05	17.36	+1.43		
Bismarck Airport	0.04	-0.41	0.30	-0.14	1.18	+0.29	2.58	+																				

Monthly and Annual Mean Temperatures for the Year 1942, with Departures from the Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.
Eastern Division																										
Casselton	19.0	+14.0	14.4	+5.3	34.0	+9.3	48.5	+6.9	53.6	-1.1	62.7	-1.2	68.6	-1.3	69.0	+1.9	55.0	-2.9	.....	.....	.....	.....	8.4	-4.4	.....	.....
Cavalier	16.0	.....	9.0	.....	27.8	.....	43.5	.....	50.9	.....	61.4	.....	67.7	.....	66.2	.....	53.9	.....	46.6	.....	23.2	.....	4.7	.....	39.4	.....
Cooperstown	15.3	+11.0	9.8	+2.0	28.2	+3.9	44.0	+3.7	50.3	-3.5	60.3	-2.9	66.1	-3.5	64.6	-2.8	51.5	-6.2	44.8	+0.1	32.8	+5.5	7.5	-5.5	39.6	+0.2
Devils Lake	16.1	+14.3	11.6	+6.5	29.2	+9.4	42.8	+4.0	49.0	-3.6	60.0	-1.9	65.8	-1.6	65.2	+0.4	52.7	-3.2	46.3	+3.9	26.2	+1.7	6.0	-3.5	39.2	+2.2
Edgeley	20.9	+12.1	16.2	+3.4	33.0	+5.7	47.6	+5.0	50.8	-3.6	61.6	-2.0	67.7	-2.2	67.8	+0.1	54.2	-4.1	48.2	+2.6	29.9	+0.6	10.0	-5.0	42.3	+1.0
Edmore	14.2	+14.0	9.8	+5.0	27.0	+5.9	42.0	+2.7	48.6	-4.6	59.0	-3.3	63.8	-3.7	63.9	-0.9	51.6	-4.8	44.7	+2.2	24.2	-0.4	4.0	-6.5	37.7	+0.4
Ellendale	20.9	+10.9	17.1	+4.0	32.6	+5.4	47.2	+4.5	51.3	-4.0	62.2	-2.6	68.5	-2.4	67.6	-1.1	54.4	-4.4	47.2	+1.3	30.8	+2.4	12.6	-3.7	42.7	+0.9
Fargo	18.0	+14.2	13.4	+5.3	33.8	+11.1	47.8	+7.2	52.0	-3.1	62.6	-1.8	68.8	+0.9	68.4	+2.3	54.2	-4.0	47.2	+2.7	27.5	+0.4	7.6	-3.9	41.8	+2.6
Forman	18.8	+11.7	15.6	+5.7	33.4	+7.4	48.2	+4.2	51.1	-4.6	62.4	-2.6	69.8	-0.9	69.4	+1.2	55.0	-4.5	47.0	+4.0	30.9	+2.3	11.7	-3.6	42.7	+1.7
Fullerton	20.2	+11.1	17.6	+5.2	32.8	+5.7	47.2	+4.5	51.5	-3.3	62.1	-2.1	68.5	-1.7	67.1	-0.9	54.0	-4.0	46.0	+0.7	30.7	+1.7	12.5	-2.7	42.5	+1.2
Grafton	17.8	+15.2	11.1	+3.8	29.8	+8.1	45.8	+5.2	51.6	-2.5	62.1	-1.6	67.6	-1.2	67.2	+1.0	54.4	-2.6	48.0	+4.2	25.8	+0.8	6.0	-4.7	40.6	+2.1
Grand Forks	16.6	+13.0	10.7	+3.0	31.8	+9.3	46.1	+4.8	52.5	-1.7	62.4	-1.0	67.2	-1.3	66.6	+0.6	53.4	-3.5	47.0	+3.3	25.8	0.0	5.8	-5.2	40.5	+1.8
Grand Forks Airport	15.7	.....	9.6	.....	30.8	.....	44.6	.....	50.4	.....	61.1	.....	66.4	.....	65.6	.....	53.6	.....	46.2	.....	24.0	.....	4.4	.....	39.4	.....
Hankinson	19.8	+11.9	16.0	+1.9	33.8	+5.2	48.0	+4.5	52.4	-5.6	63.6	-3.3	69.3	-2.1	68.8	-1.9	54.2	-6.3	47.4	+0.8	28.6	-0.3	8.5	-9.2	42.5	-0.4
Hannah	13.1	+14.3	6.6	+4.0	23.5	+4.3	39.5	+1.6	46.2	-5.4	57.5	-3.0	62.0	-4.2	62.6	-1.5	51.2	-3.6	45.6	+4.8	22.5	+1.8	3.1	-4.5	36.1	+0.7
Hillsboro	18.2	+13.3	12.6	+2.4	33.2	+7.9	47.4	+5.2	52.6	-2.2	62.5	-2.2	68.5	-2.2	68.0	-0.2	54.6	-4.4	47.8	+2.6	27.5	+0.2	8.0	0.0	41.7	+1.7
Jamestown	19.6	+12.5	15.6	+6.7	32.2	+7.8	46.6	+4.9	51.5	-2.6	62.0	-1.7	68.2	-1.4	67.8	+0.9	55.0	-2.0	47.6	+2.9	30.6	+3.3	11.0	-2.9	42.3	+2.3
Jamestown Airport	18.3	.....	14.3	.....	31.2	.....	44.0	.....	49.8	.....	60.2	.....	66.7	.....	65.9	.....	52.8	.....	46.2	.....	28.2	.....	9.0	.....	40.6	.....
Kensal	16.9	.....	13.5	.....	31.1	.....	43.8	.....	49.4	.....	59.2	.....	65.8	.....	65.8	.....	53.6	.....	46.0	.....	29.2	.....	9.2	.....	40.3	.....
Langdon	14.4	+14.8	9.2	+4.4	27.2	+7.4	41.4	+3.8	48.4	-3.4	59.0	-1.6	64.1	-2.2	63.8	+0.1	52.5	-1.0	45.8	+4.9	25.4	+1.7	4.7	-4.1	38.0	+2.1
Larimore	17.9	+14.1	10.6	+2.9	31.2	+8.5	45.5	+5.3	51.0	-2.4	61.1	-1.8	66.9	-1.2	66.4	+0.5	54.2	-2.2	48.0	+3.9	27.0	+1.2	6.5	-5.0	40.5	+2.0
Lisbon	20.2	+12.6	16.2	+1.6	34.5	+7.2	46.4	+4.3	51.6	-3.2	62.2	-2.2	68.6	-1.8	67.8	0.0	53.0	-5.1	46.6	+1.9	29.8	+1.0	11.2	-3.6	42.3	+1.3
Mayville	19.6	+13.6	12.1	+2.3	33.6	+8.9	47.0	+4.5	53.3	-2.1	62.5	-2.0	69.4	-0.8	.....	.....	.....	.....	.....	.....	29.3	+1.5	7.0	-6.3	.....	.....
McHenry (near)	15.2	+13.7	10.8	+5.4	28.7	+6.7	41.8	+1.2	48.2	-4.5	58.6	-3.2	64.6	-3.5	63.6	-2.1	51.2	-4.6	44.4	+1.1	26.6	0.0	6.2	-4.6	38.3	+0.4
McLeod	20.1	+11.8	14.8	+1.8	32.0	+4.2	44.4	+0.8	54.0	-1.8	58.8	-6.5	69.0	-2.4	68.6	+0.1	54.2	-5.4	46.0	-0.5	30.3	+0.6	10.0	-5.1	41.8	-0.2
Milnor	16.0	.....	11.8	.....	32.6	.....	46.9	.....	53.6	.....	62.4	.....	69.4	.....	69.4	.....	54.8	.....	46.2	.....	29.2	.....	6.2	.....	41.5	.....
Oakes	19.6	+10.7	16.6	+3.7	32.2	+4.5	45.2	+2.4	49.7	-5.9	61.2	-4.1	67.2	-4.5	66.6	-2.5	53.0	-6.0	44.8	-1.2	30.6	+2.0	12.0	-4.2	41.6	-0.4
Park River	17.8	+14.9	10.2	+2.5	29.2	+6.4	44.2	+3.7	51.4	-2.2	61.4	-1.7	65.8	-2.7	65.1	-1.5	53.0	-3.6	46.8	+3.1	25.0	-2.0	4.0	-7.1	39.5	+0.8
Pembina	16.2	+18.6	9.0	+6.2	28.4	+10.0	44.1	+5.6	50.4	-2.8	60.2	+3.4	66.8	+2.1	66.8	+2.1	53.0	-1.5	46.2	+4.6	23.8	+0.4	.....	.....	.....	.....
Pembina Airport	14.2	+16.6	8.6	+5.8	28.8	+10.4	43.3	+4.8	49.6	-3.6	60.7	-2.1	65.8	-2.0	65.3	+0.6	52.0	-2.5	46.0	+4.4	21.7	-1.7	3.2	-3.8	38.3	+2.3
Sharon	16.8	+13.3	11.0	+1.5	30.0	+5.8	43.9	+4.3	50.0	-4.1	60.2	-2.8	66.7	-4.1	66.0	-1.9	52.7	-4.7	46.6	+3.0	26.7	+2.0	5.8	-6.4	39.7	+0.5
Valley City	19.6	+13.5	15.8	+4.3	33.5	+7.2	48.0	+5.6	51.9	-2.7	61.9	-2.2	68.2	-1.9	68.0	-3.0	55.8	-3.0	47.5	+2.4	30.6	+2.6	10.5	-4.0	42.6	+1.8
Wahpeton	20.0	+11.3	16.7	+4.3	34.8	+7.2	50.2	+6.0	53.8	-2.5	63.5	-2.3	69.4	-1.5	69.4	+0.7	56.0	-4.0	48.5	+1.5	29.2	+0.2	9.6	-6.2	43.4	+1.2
Middle Division																										
Ashley	18.0	+9.3	14.2	+2.8	29.9	+5.0	45.0	+2.6	48.4	-5.8	59.0	-4.2	65.2	-4.5	65.6	-1.6	51.7	-6.2	44.6	+0.2	28.4	+0.4	11.8	-3.0	40.2	-0.4
Bisbee	15.1	+13.3	10.0	+3.5	28.4	+5.9	44.2	+3.3	50.5	-2.2	61.8	-0.3	65.8	-1.6	66.4	-0.7	53.8	-2.9	46.8	+3.0	25.8	-0.6	8.5	-1.2	39.8	+1.8
Bismarck	19.4	+13.1	16.8	+8.3	31.4	+9.5	46.2	+6.9	50.6	-2.4	61.5	-1.4	68.4	-1.0	67.9	-1.2	55.2	-2.1	47.1	+3.5	29.8	+3.3	14.8	-0.9	.....	.....
Bismarck Airport	13.7	+12.3	10.1	+5.2	27.4	+6.6	41.5	+2.5	49.9	-4.2	58.8	-3.0	65.9	-1.7	64.5	-0.4	54.1	-1.4	45.2	+3.8	22.0	-1.6	4.4	-3.9	38.1	+1.3
Bottineau	16.6	+9.9	11.7	+2.8	29.0	+5.3	42.1	+2.5	47.9	-5.2	58.8	-4.6	65.7	-3.7	64.8	-2.3	50.4	-6.5	45.4	+1.7	27.2	-0.1	7.6	-5.0	38.9	-0.5
Carrington	21.0	+10.9	17.2	+2.7	30.1	+3.1	46.5	+4.0	50.0	-5.5	60.3	-3.4	68.0	-2.8	67.6	-1.0	55.0	-3.1	47.2	+2.7	30.2	+0.4	16.4	-0.2	42.4	+0.7
Carson	19.5	.....	17.8	.....	30.0	.....	45.6	.....	50.0	.....	60.4	.....	66.9	.....	66.8	.....	53.3	.....	45.5	.....	29.0	.....	13.0	.....	41.5	.....
Center	19.6	+11.7	15.0	+1.9	30.4	+4.0	45.0	+3.7	50.2	-4.6	59.4	-3.1	66.1	-3.9	65.6	-1.6	54.0	-3.5	48.1	+3.3	28.7	+2.2	10.7	-4.1	41.1	+0.5
Dogden Butte	16.8	+11.3	12.6	+2.2	29.1	+4.4	43.2	+2.8	48.9	-5.8	59.8	-4.0	67.0	-4.6	65.4	-2.2	54.2	-3.4	46.4	+3.3	27.4	+1.5	7.8	-7.6	39.9	-0.2
Drake	14.7	+11.9	11.3	+4.6	27.2	+6.7	41.9	+2.4	48.6	-4.2	57.9	-3.5	64.6	-2.4	63.6	-1.0	52.9	-2.1	46.6	+5.0	23.6	-0.5	6.2	-4.1	38.3	+1.1
Dunseith	16.4	+13.3	12.9	+5.4	28.7	+5.7	43.3	+2.9	49.8	-2.8	59.7	-3.2	66.0	-2.0	65.4											

[Continued from page 49]

seriously delayed by the wet weather. The severe freeze on the 26-28th froze the ground to a depth of 3 inches in a few localities. Gardens were destroyed and considerable corn and late flax were damaged.

OCTOBER.—Moderate temperatures and below normal precipitation characterized the weather during the month. A storm period prevailed from the 22d to the 25th with high winds and rain turning to snow. Blizzard conditions prevailed at some places during this period. The mild weather during the first three weeks permitted much threshing and corn harvesting. Fall plowing was below average due to dry ground and labor shortage. Ranges and livestock remained in very good condition.

NOVEMBER.—November was mild with the temperatures above normal and the precipitation below. The temperature was considerably below normal during the last week, but warm weather

prevailed from the 1st to the 24th. The precipitation was light. Late harvesting and threshing made good progress during the month and livestock was in good condition, with feed plentiful. DECEMBER.—Temperature and sunshine averaged below normal. It was the coldest December in 10 years. Precipitation was slightly above average and most stations had a trace or more of precipitation on more than 20 days. Snowfall was heavy over the northeast, with many stations reporting more than a foot of snow. Farm work consisted mostly of yard feeding, with livestock in excellent condition.

CLIMATOLOGICAL SUMMARY, 1942

Month	Temperature in degrees Fahrenheit				Precipitation, in inches			Number of days			
	Mean	Departure	Highest	Lowest	Average	Departure	Snowfall	Precip. inches or more	Clear	Pt. cloudy	Cloudy
January	18.5	+12.0	60	-35	0.09	-0.38	1.0	2	16	7	8
February	14.1	+4.4	57	-30	0.36	-0.11	4.6	5	6	9	13
March	30.0	+6.1	66	-8	1.83	+1.05	12.8	9	9	8	14
April	44.9	+3.4	90	-6	1.96	+0.51	3.3	7	11	9	10
May	50.0	-3.6	87	19	3.03	+0.71	0.5	11	9	9	13
June	60.1	-2.9	90	27	3.12	-0.30	0	11	9	12	9
July	67.1	-1.9	97	36	2.43	-0.01	0	7	13	13	5
August	66.3	-0.2	105	33	3.09	+1.05	0	9	12	12	7
September	54.0	-2.8	99	4	1.67	+0.11	2.7	9	12	9	9
October	46.5	+2.5	90	-3	0.46	-0.55	1.8	4	14	8	9
November	28.0	+1.3	73	-14	0.18	-0.40	1.5	3	10	10	10
December	10.9	-2.4	53	-30	0.53	+0.05	7.1	7	7	8	16
Annual	40.9	+1.4	105	-35	18.75	+1.72	35.3	84	128	114	123

COMPARATIVE ANNUAL DATA FOR THE STATE

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.8	108	-52	20.24	21.00	13.79	18.34	34.9	70	157	95	114
1893...	35.8	112	-54	18.02	16.33	13.19	15.85	46.1	65	154	104	107
1894...	40.3	107	-47	17.45	14.55	14.84	15.61	24.6	56	174	100	91
1895...	37.7	104	-50	18.41	16.97	16.69	17.36	20.9	63	155	117	93
1896...	37.3	107	-42	26.30	21.67	19.97	22.65	48.3	80	143	111	112
1897...	37.8	109	-48	18.75	16.04	13.26	16.02	33.9	63	162	105	98
1898...	39.2	106	-38	18.97	15.55	13.92	16.15	22.7	57	159	108	98
1899...	36.9	109	-48	17.40	19.48	15.98	17.62	26.6	60	161	105	99
1900...	40.9	114	-48	21.61	18.70	16.88	19.06	23.2	62	178	97	90
1901...	40.4	110	-43	24.35	17.54	16.33	19.41	20.2	63	175	92	98
1902...	39.4	106	-39	21.66	18.50	17.89	19.35	29.9	62	160	79	126
1903...	38.3	108	-49	20.18	18.27	19.28	19.24	28.8	65	166	81	118
1904...	37.6	103	-52	21.59	18.26	13.59	17.81	38.1	68	150	73	143
1905...	39.3	107	-46	23.23	19.17	14.34	18.91	29.6	66	152	79	134
1906...	39.4	109	-40	21.14	17.68	15.28	20.03	35.4	78	164	93	108
1907...	36.9	104	-49	17.17	13.06	12.69	14.31	33.7	63	175	101	89
1908...	40.7	104	-41	18.84	17.07	19.05	18.55	43.7	75	164	97	105
1909...	38.2	109	-48	21.79	15.89	16.61	18.10	33.5	71	143	110	112
1910...	41.1	114	-50	11.88	12.17	13.56	12.54	21.0	52	180	92	93
1911...	38.0	108	-43	21.73	18.60	14.94	18.42	36.5	76	160	100	105
1912...	38.2	118	-52	22.72	19.73	18.71	20.39	19.3	74	161	102	103
1913...	40.0	106	-54	17.85	13.39	12.70	14.65	19.4	64	166	104	95
1914...	40.1	109	-47	19.81	19.57	17.53	18.97	30.0	70	155	110	100
1915...	39.7	104	-48	21.06	19.06	17.72	19.28	21.2	72	148	101	116
1916...	36.2	105	-56	24.11	18.88	16.63	19.87	54.2	70	170	97	99
1917...	36.3	114	-48	12.61	10.44	9.20	10.75	40.5	60	154	111	100
1918...	40.0	102	-44	18.01	16.00	14.01	16.01	29.7	63	159	104	102
1919...	38.6	108	-44	20.55	14.71	11.51	15.59	47.2	60	165	107	93
1920...	39.5	108	-44	17.67	14.26	13.92	15.28	27.9	64	166	108	92
1921...	42.0	110	-33	23.05	18.96	16.30	19.44	29.4	74	158	111	96
1922...	39.7	115	-46	21.97	19.09	18.62	19.89	42.8	75	155	100	110
1923...	40.7	103	-40	19.12	16.65	17.00	17.79	30.1	64	160	110	95
1924...	38.2	105	-46	20.28	16.39	14.74	17.12	26.1	66	158	101	107
1925...	40.6	111	-39	21.91	14.74	13.29	16.65	19.7	64	158	107	100
1926...	40.7	108	-36	18.05	14.40	13.65	15.37	23.7	68	151	105	109
1927...	38.0	101	-44	22.72	21.25	20.56	21.51	36.2	79	150	102	113
1928...	41.1	107	-41	20.03	18.12	15.48	17.88	17.3	59	177	101	88
1929...	38.0	109	-44	15.09	13.27	14.57	14.31	41.8	65	171	98	96
1930...	41.4	107	-43	17.13	14.19	13.36	14.89	25.0	66	166	101	98
1931...	44.9	111	-31	18.48	14.10	12.41	15.00	18.0	56	180	92	93
1932...	40.0	108	-34	18.43	16.39	16.71	17.18	34.9	69	156	108	102
1933...	41.1	110	-45	14.01	12.74	13.59	13.45	42.2	65	161	104	100
1934...	43.4	112	-44	13.33	8.61	6.60	9.51	15.2	54	160	109	96
1935...	39.4	110	-44	21.24	17.97	14.91	18.04	33.3	77	137	113	115
1936...	38.8	121	-60	10.09	8.21	8.18	8.83	35.2	59	171	110	85
1937...	39.1	111	-44	20.10	17.37	13.63	17.03	36.0	69	150	111	104
1938...	41.9	109	-41	15.27	14.60	16.13	15.33	30.6	73	149	116	100
1939...	41.9	108	-46	15.56	13.88	13.01	14.15	25.5	71	161	109	95
1940...	41.0	107	-39	19.23	16.79	16.14	17.39	33.6	80	142	110	114
1941...	42.2	111	-40	25.07	22.42	22.19	23.23	25.1	92	128	115	122
1942...	40.9	105	-35	22.40	17.62	16.22	18.75	35.3	84	128	114	122
Period	39.5	121	-60	19.36	16.49	15.25	17.03	30.9	67	159	103	103

Killing Frosts

STATIONS		Last in Spring	First in Autumn	STATIONS		Last in Spring	First in Autumn
<i>Eastern Div.</i>							
Casselton	May 5	Sept. 19	Hansboro	May 14	Sept. 19		
Cavalier	" 14	" 22	Linton	" 14	" 19		
Cooperstown	" 14	" 19	Maddock	" 14	" 19		
Devils Lake	" 14	" 19	Mandan	" 14	" 24		
Edgeley	" 14	" 19	Max	" 14	" 19		
Edmore	" 14	" 19	McClusky	" 14	" 19		
Ellendale	" 14	" 24	Medina	" 14	" 19		
Fargo	" 5	" 19	Minot	June 23	" 19		
Forman	" 14	" 19	Mohall	May 16	" 18		
Fullerton	" 14	" 19	Napoleon	" 14	" 19		
Grafton	" 14	" 19	New Salem	" 14	" 23		
Grand Forks	" 14	" 19	Pettibone	June 23	" 19		
Hankinson	" 5	" 19	Rolla	May 14	" 22		
Hannab	" 17	" 24	Selfridge	" 14	" 19		
Hillsboro	" 14	" 19	Steele	" 14	" 18		
Jamestown	" 14	" 19	Towner	" 14	" 19		
Kensal	" 14	" 19	Turtle Lake	" 14	" 26		
Langdon	" 14	" 19	Velva	" 14	" 26		
Larimore	" 14	" 19	Washburn	" 14	" 26		
Lisbon	" 6	" 19	Westhope	" 14	" 18		
Mayville	" 5	" 19	Willow City	" 14	" 19		
McHenry	" 14	" 19	Wilton	" 14	" 23		
McLeod	" 14	" 23	Wishek	" 14	" 19		
Milnor	" 4	" 24	<i>Western Div.</i>				
Oakes	" 20	" 19	Alpha	May 14	Sept. 24		
Park River	" 14	" 19	Amidon	" 19	" 18		
Pembina Airport	" 14	" 19	Beach	" 14	" 23		
Petersburg	" 14	" 19	Berthold Agency	June 23	" 19		
Sharon	" 14	" 19	Bowbells	" 13	" 18		
Valley City	" 5	" 19	Bowman	May 19	" 24		
Wahpeton	" 5	" 24	Crosby	June 13	" 19		
<i>Middle Div.</i>				Dickinson	May 19	" 24	
Ashley	May 14	Sept. 19	Dunn Center	" 19	" 24		
Bisbee	" 14	" 19	Epping	June 13	" 19		
Bismarck	" 14	" 19	Fryburg	May 5	" 23		
Bottineau	" 14	" 19	Golva	" 18	" 23		
Carrington	" 15	" 19	Halliday	" 14	" 26		
Carson	" 19	" 19	Hettinger	" 14	" 19		
Center	June 23	" 19	Kenmare	" 16	" 26		
Dogden Butte	May 14	" 24	Marmarth	" 19	" 19		
Drake	" 14	" 23	Mott	" 14	" 19		
Dunseith	" 14	" 19	New England	" 4	" 23		
Eckman	June 13	" 19	Parshall	June 23	" 19		
Energy	May 14	" 23	Portal	" 13	" 18		
Fessenden	" 14	" 19	Powers Lake	" 22	" 18		
Fort Yates	" 14	" 19	Richardton	May 14	" 23		
Foxholm	" 14	" 19	Sanish	" 19	" 19		
Gackle	" 14	" 19	Stanley	" 19	" 19		
Garrison	" 19	" 25	Van Hook	June 23	" 19		
Granville	" 14	" 19	Watford City	May 14	" 26		
			Williston	" 19	" 23		

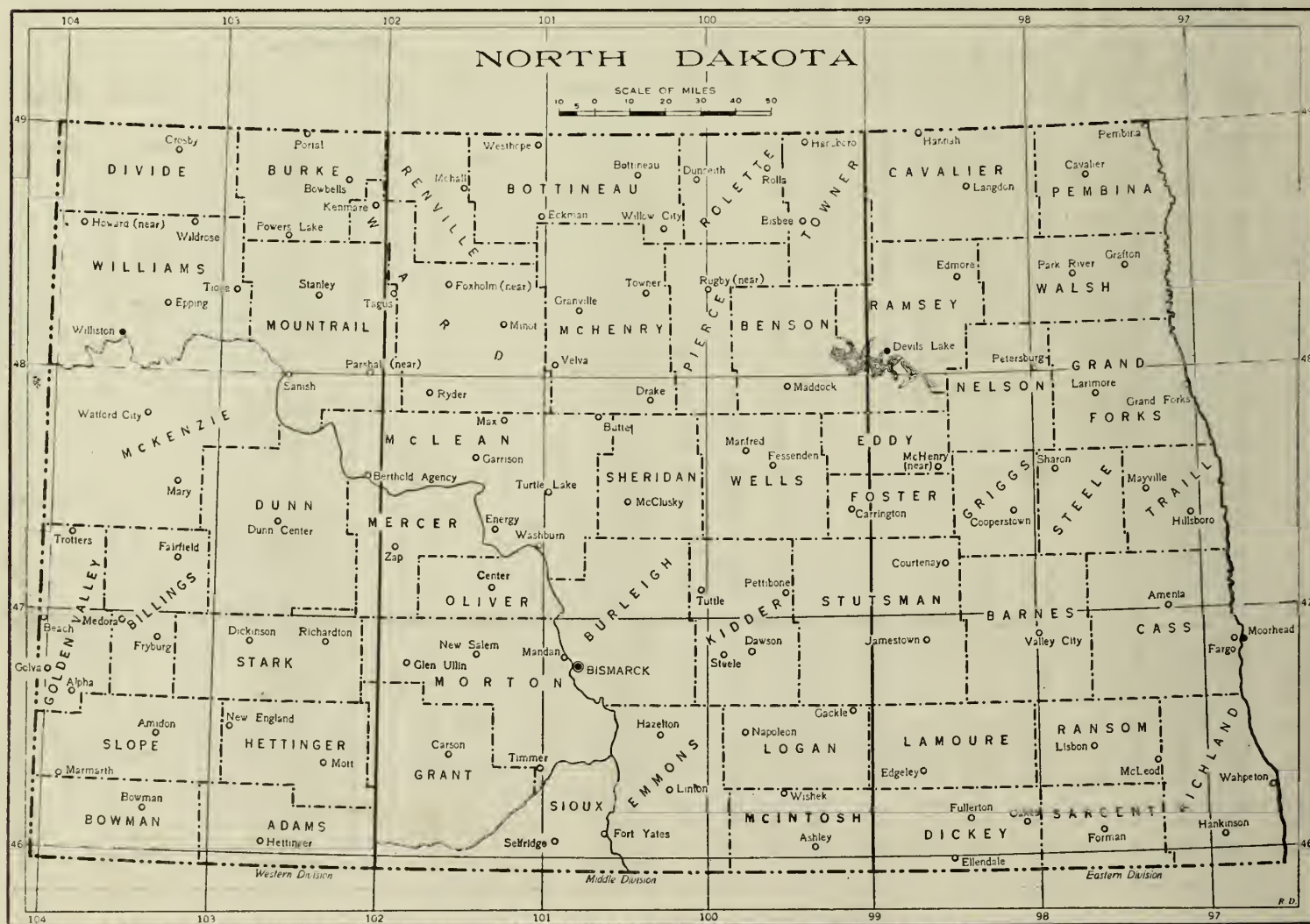
Monthly and Annual Precipitation for the Year 1942, with Departures from the Normal-Continued

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
Western Division																										
Halliday	0.20	.....	1.00	.....	1.70	.....	1.94	.....	1.93	.....	6.45	.....	1.33	.....	3.33	.....	2.40	.....	0.29	.....	0.05	.....	0.21	.....	20.83	.....
Hettinger	0.02	-0.28	0.63	+0.21	0.86	+0.16	2.89	+1.92	3.54	+1.16	3.71	+0.51	2.51	+0.45	1.34	-0.29	1.92	+0.52	0.36	-0.41	0.26	-0.16	0.45	+0.05	18.79	+3.84
Kenmare	0.18	-0.17	0.53	+0.16	1.95	+1.32	0.83	-0.12	0.93	-1.03	1.37	-1.69	0.98	-1.31	2.12	+0.18	1.39	-0.22	T	-1.06	0.17	-0.38	0.35	-0.11	10.80	-4.43
Marmarth	0.07	-0.33	0.59	+0.15	1.06	+0.34	2.35	+1.33	3.70	+1.38	4.02	+0.96	1.44	-0.44	2.37	+0.63	1.71	+0.42	0.80	-0.05	0.51	+0.12	0.25	-0.16	18.87	+4.35
Mary	0.02	-0.42	0.23	-0.11	0.66	+0.10	1.86	+0.80	1.83	-0.25	3.95	+1.01	1.27	-0.55	1.30	-0.10	2.18	+1.13	0.74	-0.04	0.07	-0.36	0.28	-0.12	14.39	+1.09
Medora	0.02	-0.55	0.65	+0.24	1.02	+0.28	2.05	+1.02	2.42	+0.18	3.82	+0.45	2.18	+0.31	1.31	-0.34	1.49	+0.12	0.63	-0.19	0.24	-0.26	0.43	-0.09	16.26	+1.17
Mott	0.01	-0.63	0.54	-0.08	0.59	-0.34	1.95	+0.74	2.58	+0.18	3.89	+0.67	2.29	+0.15	1.10	-0.83	1.68	+0.27	0.53	-0.41	0.13	-0.35	0.12	-0.48	15.41	-1.11
New England	0.02	-0.48	0.66	+0.17	0.94	+0.16	4.17	+3.16	3.15	+1.17	5.04	+2.08	2.26	+0.19	2.68	+0.98	2.60	+1.22	0.56	-0.28	0.26	-0.18	0.54	+0.13	22.88	+8.32
New Hradec	0.02	.....	0.67	.....	1.21	.....	2.72	.....	3.15	.....	8.14	.....	3.67	.....	1.35	.....	2.20	.....	0.62	.....	0.11	.....	0.42	.....	24.28	.....
Parshall	0.16	-0.08	0.31	-0.11	0.91	+0.40	1.55	+0.60	1.23	-0.94	2.24	-1.32	0.78	-1.22	1.50	-0.46	1.33	-0.21	0.10	-0.71	0.10	-0.27	0.19	-0.21	10.40	-4.53
Portal	0.10	-0.32	0.16	-0.24	1.16	+0.56	2.01	+1.04	1.59	-0.48	2.24	-1.05	1.27	-0.84	2.71	+0.82	1.82	+0.23	0.17	-0.72	0.02	-0.53	0.34	-0.13	13.59	-1.66
Powers Lake	0.30	-0.21	0.65	+0.19	1.09	+0.40	1.87	+0.66	2.29	+0.11	2.35	-1.25	2.29	-0.30	3.10	+1.33	1.82	+0.31	0.73	-0.49	0.13	-0.36	0.47	-0.09	17.09	+0.30
Richardton	0.02	-0.36	0.89	+0.49	0.50	-0.22	1.50	+0.36	2.92	+0.34	4.11	+0.70	2.57	+0.32	2.13	+0.18	1.64	+0.28	0.31	-0.57	0.27	-0.21	0.58	+0.19	17.44	+1.50
Sanish	0.12	-0.36	0.70	+0.27	2.09	+1.51	2.18	+1.08	1.80	-0.10	3.19	-0.19	0.34	-1.71	2.46	+0.92	1.11	-0.07	0.14	-0.67	0.21	-0.29	0.37	-0.13	14.71	+0.26
Stanley	0.06	.....	0.22	.....	1.27	.....	1.75	.....	2.06	.....	1.50	.....	1.40	.....	1.72	.....	0.85	.....	0.12	.....	0.11	.....	0.43	.....	11.49	.....
Tioga	0.02	-0.44	0.50	+0.08	1.35	+0.72	1.61	+0.65	2.57	+0.63	2.01	-0.79	0.68	-1.14	2.08	+0.77	1.83	+0.87	.....	.....	.....	.....	0.21	-0.29	.....	.....
Trotters	0.13	-0.27	0.87	+0.50	1.53	+0.77	2.43	+1.40	2.79	+0.47	3.75	+0.27	1.70	+0.14	2.84	+1.33	1.22	-0.03	0.46	-0.37	0.28	-0.16	0.53	+0.13	18.53	+4.18
Van Hook	0.08	.....	0.48	.....	0.83	.....	1.19	.....	1.43	.....	3.29	.....	0.22	.....	2.66	.....	1.12	.....	0.06	.....	0.15	.....	0.34	.....	11.85	.....
Watford City	0.05	-0.42	0.74	+0.32	1.80	+1.12	2.11	+0.95	1.61	-0.36	3.10	-0.10	2.22	+0.39	2.89	+1.18	1.89	+0.57	0.75	-0.12	0.12	-0.38	0.68	+0.14	17.96	+3.29
Wildrose	0.10	-0.41	0.44	+0.01	0.65	-0.04	1.72	+0.76	1.56	-0.31	3.23	+0.32	1.64	-0.23	2.38	+0.74	1.46	+0.39	0.11	-0.71	0.06	-0.45	0.32	-0.18	13.67	-0.11
Williston	0.15	-0.39	0.79	+0.38	1.12	+0.43	1.34	+0.14	1.53	-0.53	5.56	+2.13	1.14	-0.75	1.79	+0.32	1.53	+0.44	0.45	-0.41	0.10	-0.48	0.54	-0.04	16.04	+1.24

MONTHLY AMOUNTS OF EVAPORATION-inches-and WIND MOVEMENT-miles-for 1942

Station	Data	Apr.	May	June	July	Aug.	Sept.	Seasonal	Average	Observer
Dickinson	Evaporation	3.406	2.956	4.917	5.623	5.403	3.848	26.153	36 years 34.831	Agri. Experiment Substa.
	Wind movement	4.470	4.290	3.890	2.870	2.880	3.070	21.470	29 years 34.050	
Mandan	Evaporation	3.091	3.070	4.792	5.462	5.324	3.649	25.388	34.050	No. Gr. Plains Field Sta.
	Wind movement	4.251	4.741	3.878	2.452	2.750	2.668	20.740	.....

CHART SHOWING METEOROLOGICAL STATIONS



Key to Symbols: ● Meteorological observations (regular Weather Bureau stations). ○ Meteorological observations (sub-stations). [WBO, Minneapolis, 3-15-43-1500]

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CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LII BISMARCK, N. D., JANUARY 1943 No. 1

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GENERAL SUMMARY

This was the coldest January since 1937, and the temperature averaged 19.7° lower than in January 1942. The 16th to the 26th was one of the coldest periods of record. Continental Polar and Arctic air-masses persisted over the state and the moist southern air was forced aloft, causing much cloudy weather and considerable snowfall. An average of 19 days with a trace or more of snow occurred. The snowfall was heavy over the south-west part of the state where a number of stations reported more than 20 inches. It was the heaviest precipitation since 1916 in the western part of the state. At the end of the month many stations had more than a foot of snow on the ground. Much yard feeding of livestock was necessary. Highways were blocked at times and sideroads in many localities were impassable. One man froze to death during the storm on the 24th.

TEMPERATURE

The mean temperature for the state was -1.4°, or 7.8° below the 1892-1943 average for January. The mean temperature for the eastern division was -2.9°; for the middle division, -1.7°; and for the western division, 0.3°. The highest mean temperature was 5.7° at Amidon, and the lowest, -7.4° at Bottineau, making a range in mean temperature of 13.1°. The absolute range was 89°, from 45° at six stations on the 13th and 14th, to -44° at Hannah on the 20th. The average daily deficiency in temperature for the state since January 1, 1943, is 7.8°.

PRECIPITATION

The average precipitation for the state was 0.73 inch, or 0.26 inch more than the 1892-1943 average for January. In the eastern division the average amount was 0.42 inch; in the middle division, 0.74 inch; and in the western division, 1.02 inches. The greatest monthly amount reported was 1.85 inches at New England; the least was 0.02 inch at Larimore. The greatest amount recorded in any 24 consecutive hours was 0.92 inch at New England on the 15th. The accumulated excess in precipitation for the state since January 1, 1943, is 0.26 inch. The average snowfall was 9.4 inches.

ERRATA

DECEMBER 1942—
p. 46: Center, mean temperature should be 13.0°.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	26	9	3	1	3	4	3	6	1	1	1	1	1	2	6	3	3	4	2	2	1	2	2	1	2	1	1	3	12	6	4
Solar halos ..	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	2	5	1	1	1	1	1	1	1	1	1	1	1	2
Lunar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	9	5	1	1	15	9	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thund rst ms	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.78	4	29.12	15	9.5	36	nw.	11	84	84	79	85	50	2074
Devils Lake	30.70	4	29.25	15	9.0	26	n.	9	90	93	83	88	49	2167
Fargo	30.75	4	29.31	13	11.9	35	n.	24	86	83	78	84	62	2054
Williston	30.72	4	29.14	15	6.9	25	w.	9	83	86	75	77	48	2058

† And other dates.

COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	3.3	58	-52	0.31	0.41	0.25	0.32	2.8	4	15	8	8
1893...	0.8	52	-48	0.93	0.94	1.11	0.99	8.4	2	11	11	9
1894...	0.6	60	-47	0.38	0.40	0.38	0.39	3.6	4	13	9	9
1895...	-2.9	42	-46	0.53	0.69	0.47	0.56	5.5	5	16	8	7
1896...	5.3	58	-42	0.75	0.77	0.80	0.77	6.6	6	9	9	13
1897...	3.6	49	-38	0.91	0.64	0.76	0.77	7.5	5	11	9	11
1898...	14.6	69	-32	0.14	0.12	0.07	0.11	1.1	2	15	8	8
1899...	5.2	55	-41	0.29	0.20	0.26	0.25	2.4	3	13	9	9
1900...	15.4	70	-30	0.27	0.27	0.12	0.22	2.0	3	15	9	7
1901...	7.7	68	-39	0.29	0.29	0.26	0.28	3.0	4	14	8	9
1902...	12.7	51	-40	0.17	0.03	0.23	0.14	1.4	2	17	7	7
1903...	9.4	56	-37	0.72	0.58	0.68	0.66	6.7	5	13	8	10
1904...	3.6	50	-52	0.41	0.36	0.42	0.40	4.0	5	15	6	10
1905...	0.9	48	-40	0.26	0.30	0.41	0.32	2.9	3	15	8	8
1906...	12.2	60	-38	0.75	0.72	0.61	0.69	6.9	4	14	6	11
1907...	-6.2	45	-45	1.77	1.13	1.05	1.32	14.5	8	12	8	11
1908...	17.0	70	-41	0.21	0.16	0.34	0.24	1.9	2	17	8	6
1909...	3.5	53	-48	0.60	0.32	0.37	0.43	4.3	4	14	8	9
1910...	9.4	49	-35	0.30	0.21	0.59	0.37	4.1	3	16	8	7
1911...	-1.0	56	-43	0.86	0.96	0.69	0.84	8.5	6	11	8	12
1912...	-4.6	63	-52	0.34	0.34	0.36	0.35	3.6	4	16	6	9
1913...	3.2	60	-54	0.51	0.40	0.43	0.45	4.6	5	12	9	10
1914...	14.8	62	-38	0.56	0.48	0.40	0.48	4.9	4	12	8	11
1915...	5.8	51	-48	0.39	0.24	0.25	0.29	3.4	3	12	9	10
1916...	-6.4	49	-56	1.58	1.24	1.26	1.36	15.1	6	13	8	10
1917...	1.7	47	-46	0.82	0.69	0.65	0.72	8.6	5	13	8	10
1918...	0.5	48	-44	0.41	0.43	0.58	0.47	5.0	5	12	8	11
1919...	18.7	66	-44	0.24	0.21	0.10	0.18	1.7	2	17	8	6
1920...	2.7	49	-44	1.26	0.96	0.68	0.97	10.0	5	10	9	12
1921...	15.9	52	-31	0.29	0.20	0.22	0.24	2.5	2	13	9	9
1922...	7.0	55	-46	0.68	0.36	0.42	0.49	5.2	5	12	9	10
1923...	10.1	56	-35	0.59	0.43	0.54	0.52	6.0	5	9	9	13
1924...	2.6	61	-42	0.30	0.20	0.18	0.23	2.5	3	14	9	8
1925...	8.6	52	-35	0.33	0.18	0.22	0.24	2.5	3	11	10	10
1926...	16.3	55	-30	0.31	0.34	0.49	0.38	4.1	4	13	8	10
1927...	10.1	60	-44	0.50	0.36	0.41	0.42	4.3	4	14	8	9
1928...	13.0	50	-41	0.21	0.19	0.19	0.20	2.3	3	14	9	8
1929...	-4.8	42	-42	0.76	0.48	0.63	0.62	9.2	6	13	8	10
1930...	-1.9	41	-43	0.26	0.22	0.40	0.29	2.7	4	12	9	10
1931...	21.4	68	-31	0.15	0.15	0.14	0.15	1.4	2	15	8	8
1932...	9.5	50	-34	0.47	0.62	0.59	0.56	6.3	4	12	7	12
1933...	11.8	53	-30	0.92	0.70	0.79	0.80	10.0	7	12	7	12
1934...	15.8	54	-36	0.29	0.14	0.17	0.20	2.0	3	11	9	11
1935...	3.3	60	-44	0.55	0.29	0.39	0.41	4.9	6	8	10	13
1936...	-5.8	43	-44	0.51	0.48	0.69	0.56	6.9	7	11	8	12
1937...	-8.3	38	-44	1.04	0.55	0.42	0.67	9.0	6	13	8	10
1938...	9.5	50	-40	0.36	0.42	0.67	0.48	6.1	6	10	9	12
1939...	15.0	55	-32	0.56	0.32	0.54	0.47	6.0	6	8	10	13
1940...	3.4	48	-39	0.10	0.11	0.10	0.10	1.4	3	13	9	9
1941...	11.0	53	-33	0.80	0.56	0.25	0.54	6.3	5	10	7	14
1942...	18.3	60	-35	0.09	0.08	0.10	0.09	1.0	2	16	7	8
1943...	-1.4	45	-44	0.42	0.74	1.02	0.73	9.4	7	10	8	12
Period	6.4	70	-56	0.53	0.43	0.46	0.47	5.1	4	13	8	10

UNIVERSITY OF ILLINOIS

Climatological Data for January 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 40 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	47	-0.8	-5.8	37	13	-32	17	0.38	-0.08	0.22	3	7.5	4	13	7	11	n.	C. Hayford.
Cavalier	Pembina	894	33	-5.9		41	10	-37	21	0.66	-0.01	0.36	24	9.4	6	13	3	15	nw.	City Light & Power Co.
Colgate	Steele	1,180	10							0.21		0.07	21	2.0	6	9	7	15	n.	M. H. Badger.
Cooperstown	Griggs	1,428	46	-1.6	-5.9	39	14	35	17	0.35	-0.14	0.14	30	5.1	4	5	11	15	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	13							0.19	-0.49	0.17	3	2.0	2	12	9	10	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	-4.8	-6.6	37	13	-34	17	0.39	-0.08	0.10	30	4.3	10	6	7	18	nw.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	42	0.0	-8.8	38	13†	-33	17	0.65	+0.25	0.33	16	9.0	5	7	11	13	nw.	O. A. Thompson.
Edmore	Ramsey	1,524	19	-6.6	-6.8	36	13†	-42	18	0.22	-0.29	0.10	24	2.5	6	13	8	10	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	-0.1	-10.1	38	10	-32	17	0.89	+0.40	0.34	3	11.1	12	10	2	19	nw.	J. E. Demmer.
Fargo	Cass	895	16	-1.3	-5.1	37	13	-30	17	0.33	-0.34	0.10	13	3.3	10	7	7	17	n.	U. S. Weather Bureau.
Foran	Sargent	1,249	50	-1.4	-8.5	38	13†	-38	17	0.84	+0.38	0.33	3	10.3	5					Helge Dyste.
Fullerton	Dickey	1,439	45	0.9	-8.2	39	14	-31	17	1.33	+0.54	0.38	3	13.7	11	12	2	17	nw.	F. O. Alin.
Grafton	Walsh	827	51	-3.0	-5.6	39	10†	-32	17	0.31	-0.18	0.24	25	3.6	2	10	13	8	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	830	52	-3.4	-7.0	37	10†	-36	17	0.27	-0.24	0.07	21	2.7	7	12	8	11	nw.	University of N. Dak.
Grand Forks Airport	Grand Forks	833	3	-4.6		37	13	-32	17	0.29		0.06	13	4.5	10	9	7	15	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	1.4	-6.5	39	13	-29	17†	0.33	-0.15	0.14	16	7.0	3	4	22	5	se.	Soo Line Agent.
Hannah	Cavalier	1,568	51	-7.0	-5.8	37	13	-44	20	0.25	-0.47	0.15	1	4.2	3	8	7	16	nw.	A. E. Prior.
Hillsboro	Trall	901	43	1.0	-5.9	41	10	-30	17†	0.31	-0.20	0.08	21	3.5	12	7	6	18	n.	Alfred Jahnke.
Jamestown	Stutsman	1,457	51	0.0	-7.1	39	13†	-32	18	0.37	-0.18	0.12	3	4.0	11	11	3	17	nw.	N. Dak. State Hospital.
Jamestown Airport	Stutsman	1,494	3	-2.5		38	13	-33	17†	0.37		0.14	2	4.0	11	6	8	17	nw.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	4	-2.0		42	10	-34	18	0.40		0.15	3	4.6	6	14	7	10	w.	U. S. Wildlife R. fuge.
Langdon	Cavalier	1,615	47	-4.8	-4.4	37	10	-40	20	0.63	+0.06	0.31	24	7.3	12	11	6	14	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	50	-2.6	-6.4	38	10†	-34	17	0.02	-0.64	0.02	21	0.5	1	11	4	16	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	39	0.4	-7.2	39	14	-30	17†	0.33	-0.24	0.19	3	4.3	4	12	5	14	nw.	J. O. Halverson.
Mayville	Trall	975	47	-1.9	-7.9	40	10†	-31	17	0.20	-0.20	0.04	15†	2.4	8	6	6	19	n.	H. B. Addicott.
McHenry (near)	Eddy	1,509	21	3.6	-5.1	37	10†	-37	18	0.43	-0.01	0.13	30-31	4.4	9	12	4	15	nw.	C. E. Blasky.
McLeod	Ransom	1,075	32	0.2	-8.1	40	14	-35	19	0.86	+0.29	0.35	8-9	8.6	6	10	11	10	nw.	J. G. Carlson.
McVille	Nelson	1,467	13							0.31		0.11	13	2.4	4	7	12	12	nw.	A. M. Casad.
Milnor	Sargent	1,117	4	-5.2		32	9	-38	17	0.58	+0.02	0.38	15	9.0	2	17	11	3	nw.	E. W. Wilson.
Oakes	Dickey	1,318	14	-0.4	-9.3	39	14	-42	19	0.70	+0.24	0.34	3	7.0	6	15	0	16	nw.	F. H. Murray.
Park River	Walsh	998	39	-4.6	-7.5	37	13†	-35	17†	0.17	-0.22	0.09	1	2.3	3	15	3	13	nw.	E. J. Taintor.
Pembina	Pembina	789	69	-7.1	-4.7	36	10	-37	20	0.35	-0.29	0.16	24	6.6	9	5	13	13	nw.	S. W. Douglas.
Pembina Airport	Pembina	795	4	-6.0	-3.6	40	10	-36	20	0.24	-0.40	0.09	23-24	2.2	7	4	9	18	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	13							0.29	+0.01	0.09	13	1.8	5	14	6	11	nw.	T. M. Rykken.
Sharon	Steele	1,516	19	-3.2	-6.7	39	10	-37	17	0.26	-0.20	0.06	21	2.1	10	7	9	15	nw.	Nels O. Grefsheim.
Valley City	Barnes	1,245	37	0.7	-5.4	40	10	-29	17†	0.36	-0.14	0.16	3	4.5	8	13	4	14	ne.	I. C. Robertson.
Wahpeton	Richland	962	51	0.2	-8.5	38	14	-34	17	0.36	-0.06	0.09	21	7.6	8	13	5	13	nw.	W. J. Cavanaugh.
Average for Eastern Division				-2.9	-7.7	42	10	-44	20	0.42	-0.11	0.38	3†	5.2	7	10	7	14	nw.	
Middle Division																				
Ashley	McIntosh	2,014	47	-2.0	-10.7	37	13†	-36	17	1.13	+0.66	0.51	2-3	19.5	10	8	5	18	ne.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	29							0.75	+0.32	0.24	20†	10.4	4	8	7	16	nw.	Peavey Elevator Co.
Bisbee	Towner	1,601	40	-2.8	-4.6	40	8	-39	17	0.75	+0.32	0.24	20†	10.4	4	8	7	16	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	1.6	-6.4	41	13	-34	18	1.03	+0.64	0.29	15	13.0	11	6	10	15	nw.	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	4	-2.0	-8.3	42	13	-38	18	0.75	+0.30	0.21	15	9.6	13	6	10	15	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	51	-7.4	-8.8	35	8†	-43	18	0.61	+0.20	0.25	23-24	6.5	4	15	8	8	ne.	N. D. School of Forestry
Carrington	Foster	1,579	45	-3.6	-10.3	38	13	-33	18	0.23	-0.09	0.13	3	4.5	3	15	4	12	nw.	Soo Line Agent.
Carson	Grant	2,500	31	0.0	-10.1	41	13	-40	17	1.10	+0.76	0.50	14-15	11.5	5	10	6	15	nw.	J. W. Evans.
Center	Oliver	2,100	5	0.4		42	13	-38	17	1.15		0.27	3	19.9	12	5	13	13	nw.	Fred L. Heinz.
Dogden Butte II	McLean	1,880	17	-0.8	-8.7	41	13	-33	17	0.68	+0.33	0.40	24	7.3	2	8	16	17	nw.	R. L. Williams.
Drake	McHenry	1,634	14	-3.8	-9.3	38	13	-34	17	0.59	+0.28	0.19	29-30	6.7	8	9	4	18	w.	H. G. Kringsen.
Dunseith	Rolette	1,682	47	-4.4	-7.2	39	13	-41	20	0.79	+0.35	0.22	24†	8.5	10	10	10	11	n.	Geo. Gehres.
Eckman	Bottineau	1,500	38	-5.5	-8.6	40	13	-41	25	0.52	+0.16	0.18	21	5.5	4	4	12	15	nw.	E. R. Sherman.
Energy II	McLean	1,750	28	-0.2	-10.1	44	13	-38	18	0.64	+0.33	0.20	15	9.0	5	8	13	10	nw.	H. S. Solenberger.
Fessenden	Wells	1,610	31	-2.0	-6.7	39	13	-34	17	0.60	+0.12	0.20	3	8.7	5	13	10	8	n.	John V. Zuber.
Fort Yates	Siox	1,670	43	1.6	-8.0	45	14	-38	18	0.77	+0.36	0.20	3	13.0	6	18	5	8	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	22	-2.2	-9.0	41	13	-35	20	0.61	+0.16	0.20	20	8.3	8	5	12	14	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	13	-1.2		37	14	-33	17†	1.09	+0.83	0.35	3	10.9	7	6	2	23	nw.	A. H. Haut.
Garrison	McLean	1,925	66	-2.0	-9.9	40	13	-33	18	0.96	+0.62	0.25	14-15	10.0	12	8	9	14	nw.	E. L. Vorachek.
Granville	McHenry	1,504	36	-2.6	-7.7	40	13	-35	17	0.79	+0.43	0.30	30	11.5	10	12	7	12	nw.	Fred Roble.
Hansboro	Towner	1,597	35	-5.5	-6.1	40	10†	-43	20	0.52	-0.14	0.25	21	8.2	4	14	7	10	nw.	W. E. Disher.
Harvey	Wells	1,596	40							0.40	-0.09	0.15	24	7.2	7	6	12	13	n.	Orville Hokschi.
Leeds	Benson	1,515	3	-2.6		39	13	-35	17	0.31		0.14	20	3.3	4	11	9	11	w.	John Dulmage.
Linton	Emmons	1,711	26	1.2		42	10	-38	18	1.10	+0.72	0.25	24	12.0	11	10	5	16	nw.	Wm. Heyerman.
Maddock	Benson	1,604	28	-2.9	-7.5	39	13	-36	17	0.20	-0.10	0.06	29	2.7	5	9	13	9	nw.	A. T. Felland.
Mandan	Morton	1,750	29	-0.6	-9.2	42	13	-36	18†	1.26	+0.91	0.36	3	14.8	10	10				

Climatological Data for January 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Alpha	Golden Valley	2,908	16	5.7	-8.9	44	13	-33	18	1.50	+1.04	0.86	15	11.7	10	10	8	13	nw.	H. A. Bury.
Amidon	Slope	2,759	20	3.7	-8.4	44	13	-33	18	1.06	+0.64	0.50	3	12.6	11	12	4	15	w.	Stanley W. Bale.
Beach	Golden Valley	2,082	37	2.2	-6.4	45	13	-40	18	1.59	+1.12	0.48	15	16.5	11	6	9	16	nw.	Mrs. H. Russell.
Berthold Agency H.	McLean	1,953	14	-4.2	-8.3	40	13	-36	20†	0.84	+0.61	0.27	29	14.2	10	13	10	8	nw.	H. W. Case.
Bowbells	Burke	2,872	28	4.2	-10.4	43	13	-35	18	0.81	+0.35	0.33	14-15	9.8	5	16	2	13	nw.	Charles Kaufman.
Bowman	Bowman	1,954	34	-2.2	-6.6	40	8†	-39	23	0.87	+0.46	0.40	22	16.3	10	7	5	19	nw.	Oscar L. Erickson.
Crosby	Divide	2,543	50	-0.2	-10.8	43	13	-41	18	1.13	+0.71	0.38	15	17.7	10	13	7	11	nw.	J. H. Phelps.
Dickinson	Stark	2,577	3	0.9	-	43	13	-37	17†	0.91	+0.72	0.39	14-15	13.4	12	7	7	17	nw.	Leroy Moomaw.
Dickinson Airport	Stark	2,191	43	1.2	-11.0	44	13	-39	17	1.11	+0.16	0.39	15	13.0	5	9	9	13	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,224	32	-1.8	-7.0	40	13	-38	17	0.60	+0.16	0.23	23	11.0	3	16	11	4	nw.	O. T. Evenson.
Epping	Williams	2,790	24	4.0	-	45	13	-35	18	0.98	+0.66	0.48	15	16.0	5	12	9	10	nw.	T. Beachler.
Fairfield	Billings	2,781	3	2.0	-	44	13	-33	17†	1.09	+0.53	0.46	15	9.5	9	7	10	14	nw.	Mrs. Edith Larson.
Fryburg	Golden Valley	2,073	3	-	-	45	13	-35	18	0.98	+0.53	0.46	15	9.5	3	16	11	4	nw.	Verne King.
Golva	Golden Valley	2,714	3	2.0	-	44	13	-33	17†	1.09	+0.54	0.54	14-15	13.7	13	5	12	14	w.	U. S. Airway Comm. Sta.
Halliday	Dunn	2,073	3	-	-	45	13	-35	18	0.98	+0.53	0.46	15	9.5	3	16	11	4	nw.	L. E. Roe.
Hettinger	Adams	2,675	35	-	-	42	13	-35	20†	0.60	+0.25	0.24	24	9.1	8	14	9	8	nw.	J. A. Springer.
Konmare	Ward	2,799	11	-2.4	-	42	13	-35	20†	0.60	+0.25	0.24	24	9.1	8	14	9	8	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	33	5.5	-8.0	44	13	-33	18	0.67	+0.27	0.20	2	8.7	8	7	12	12	nw.	S. P. Grane.
Mary	McKenzie	2,271	17	-	-	45	13	-33	18	1.11	+0.76	0.69	15	21.7	4	4	13	14	nw.	Fred Hartman.
Medora	Billings	2,424	35	2.7	-7.5	45	13	-43	18	1.19	+0.77	0.52	15	12.4	6	9	11	11	nw.	Ovide E. Grenier.
Mott	Hettinger	2,400	48	2.4	-11.1	45	13	-42	18	1.85	+0.55	0.45	15	16.7	10	18	1	12	nw.	P. G. Wick.
New England	Hettinger	2,400	48	2.4	-11.1	45	13	-42	18	1.85	+0.55	0.45	15	16.7	10	18	1	12	nw.	P. S. Sleight.
New Hradec	Dunn	1,929	27	0.6	-	42	13	-43	17	1.84	+0.71	0.71	15	19.3	10	17	3	11	nw.	Peter F. Fieck.
Parshall	Mountrail	1,954	37	-4.2	-9.6	40	13	-39	17	0.54	+0.30	0.12	30	7.4	10	11	12	8	nw.	C. E. Shubert.
Portal	Burke	2,205	37	-6.0	-9.0	38	13	-40	21†	0.76	+0.34	0.40	22	11.1	4	5	11	15	nw.	U. S. Customs Service.
Powers Lake	Burke	2,467	26	-2.6	-10.7	39	13	-39	17	0.70	+0.19	0.19	29	10.7	5	4	17	10	nw.	Geo. B. Gee.
Richardton	Stark	1,835	17	-2.3	-8.8	43	13	-33	17†	1.31	+0.93	0.61	15	21.5	9	10	8	13	nw.	Assumption Abbey.
Sanish	Mountrail	2,258	5	-2.6	-7.7	42	13	-38	19	0.67	+0.19	0.20	30	8.5	7	1	20	10	nw.	H. J. Bugge.
Stanley	Mountrail	2,258	5	-3.0	-	37	14†	-37	17	0.59	+0.18	0.18	15†	8.7	5	7	15	9	w.	Leroy Edwards.
Tioga	Williams	2,279	14	-	-	41	13	-37	18	0.58	+0.64	0.60	14	13.9	3	9	3	19	nw.	B. V. Olson.
Trotters	Golden Valley	1,864	3	-1.1	-	41	13	-37	18	0.58	+1.16	0.47	15	19.1	8	5	11	15	nw.	Walter Grunewald.
Van Hook	Mountrail	2,054	29	1.2	-8.6	43	14	-41	17	1.10	+0.20	0.15	15	6.4	5	9	13	9	ne.	Soil Conservation Serv.
Watford City	McKenzie	2,258	15	-	-	43	14	-41	17	1.10	+0.63	0.48	15	16.0	7	12	7	12	w.	J. C. Zeller.
Willdore	Williams	2,258	15	-	-	43	14	-41	17	1.10	+0.25	0.30	22	10.8	6	18	9	4	n.	L. Holter.
Williston	Williams	1,878	63	-1.3	-7.7	42	13	-35	17	1.51	+0.97	0.46	14-15	15.1	13	7	10	14	n.	U. S. Weather Bureau.
Average for Western Division				0.3	-9.0	45	13	-43	17†	1.02	+0.56	0.92	15	13.4	8	10	9	12	nw.	
Average for the State				-1.4	-7.8	45	13†	-43	17†	0.73	+0.26	0.92	15	9.4	7	10	8	13	nw.	

Daily Temperatures for January 1943

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum...	16	3	1	3	11	5	10	35	31	36	22	11	37	37	26	4	-20	-17	-18	-19	-7	-6	-10	-11	-5	-1	13	14	21	11	9	7.8
	Minimum...	0	-6	-24	-17	-13	-18	-5	9	14	11	2	-11	-7	24	3	-20	-36	-32	-34	-26	-20	-15	-18	-23	-32	-26	-12	-6	4	-7	-18	-11.9
Beach	Maximum...	31	7	14	20	20	25	29	35	40	39	32	28	44	38	35	12	-18	-10	-12	-15	-13	-3	-8	-1	19	25	19	11	5	12	14.5	
	Minimum...	6	-1	-12	-14	-4	4	17	2	23	27	12	1	1	1	11	-18	-29	-33	-22	-28	-23	-18	-20	-26	-29	-27	5	1	-1	-10	-6	7.1
Bismarek Airport ¹	Maximum...	20	-1	-5	7	4	2	18	37	32	39	22	16	42	38	31	3	-18	-14	-18	-9	-6	-10	-10	-2	0	4	11	8	8	10	8.1	
	Minimum...	-1	-10	-18	-18	-23	-12	2	15	9	2	5	-9	-11	30	3	-24	-33	-38	-28	-26	-18	-15	-20	-26	-32	-29	-13	-12	4	-4	-12	-12.0
Bottineau	Maximum...	-4	-3	0	-10	-2	6	21	35	34	35	14	14	35	25	18	-15	-20	-18	-32	-20	-15	-15	-14	-12	-20	-5	4	10	10	8	5	2.6
	Minimum...	-2	-21	-23	-25	-26	-19	-21	6	20	5	6	-12	-10	12	12	-16	-42	-43	-39	-41	-39	-22	-30	-29	-40	-37	-29	6	-2	-1	-24	-17.4
Carson	Maximum...	20	8	6	11	19	8	24	36	36	38	25	21	41	38	32	9	-21	-15	-20	-10	-3	-8	-12	-5	-2	10	15	10	5	15	10.2	
	Minimum...	6	-6	-8	-16	-3	-12	-3	15	17	12	9	-6	1	29	7	-24	-40	-39	-29	-28	-25	-17	-19	-26	-30	-24	-14	-10	-15	-5	-13	-10.2
Crosby	Maximum...	10	0	0	8	17	12	23	40	38	36	27	14	39	40	33	6	-17	-9	-10	-25	-18	-13	-16	-17	-10	3	3	3	5	7	7.5	
	Minimum...	-2	-28	-17	-23	-6	-9	10	22	21	20	10	-6	3	33	5	-19	-35	-33	-29	-37	-28	-25	-19	-31	-37	-33	-12	-11	-5	-5	-19	-11.8
Devils Lake ¹	Maximum...	4	-2	0	1	2	1	9	34	30	37	19	4	37	35	10	-2	-19	-12	-20	-26	-11	-14	-14	-12	-9	1	5	10	2	10	2	3.9
	Minimum...	-4	-23	-14	-20	-13	-24	-7	6	23	17	4	-11	-5	9	7	-28	-34	-30	-33	-26	-18	-23	-27	-29	-24	-11	-5	3	2	-14	-13.6	
Dickinson Airport ³	Maximum...	25	2	8	17	16	20	26	36	36	39	23	24	43	36	30	-8	-19	-12	-21	-11	-4	-10	-17	-2	17	14	9	6	4	13	10.3	
	Minimum...	-2	-6	-12	-10	-4	-5	20	11	22	19	3	2	12	30	8	-36	-37	-37	-30	-28	-21	-15	-18	-28	-29	-22	-8	-9	0	-8	7	8.5
Dunn Center	Maximum...	18	7	9	12	15	12	25	38	42	36	25	41	41	35	11	-18	-11	-15	-22	-11	-7	-7	-13	-4	8	8	7	7	8	15	11.4	
	Minimum...	5	-9	-11	-17	-11	-6	11	25	23	14	-2	-2	32	10	-20	-39	-35	-29	-30	-27	-16	-23	-26	-29	-27	-13	-10	-5	0	-8	-9.0	
Fargo ¹	Maximum...	10	1	4	7	7	4	8	34	34	37	21	6	37	36	15	3	-18	-14	-16	-15	-2	5	4	-6	-4	-2	10	22	30	14	7	8.1
	Minimum...	-1	-10	-18	-18	-13	-18	-10	-10	18	16	2	-11	-13	-5	3	-20	-28	-29	-24	-15	-14	-16	-17	-26	-25	-10	-6	13	6	-13	-10.7	
Fessenden	Maximum...	8	5	-1	6	5	1	11	37	38	29	15	39	38	20	13	-17	-13	-17	-20	-11	-10	-12	-12	-8	0	3	10	10	7	7	7.0	
	Minimum...	2	-22	-10	-17	-6	-23	-2	3	25	12	-10	-11	-3	20	8	-17	-34	-33	-28	-32	-25	-16	-23	-22	-28	-25	-15	-14	-7	4	-17	-11.0
Fullerton	Maximum...	14	10	2	5	6	1	8	34	37	37	32	16	38	39	20	13	-8	-15	-17	-19	-5	-5	-8	-9	-5	2	9	12	18	25	11	9.8
	Minimum...	7	-5	-4	-16	-16	-10	-12	-6	26	11	15	-9	-8	18	13	-10	-31	-30	-26	-27	-22	-13	-17	-18	-24	-12	-6	2	11	7	-8.0	
Garrison ³	Maximum...	12	3	3	8	11	6	21	36	38	37	17	13	40	36	30	3	-18	-11	-18	-23	-10	-7	-13	-10	-6	-1	2	11	5	7	9	6.9
	Minimum...	-10	-19	-10	-12	-13	-17	-6	17	14	13	1	-6	-4	27	3	-25	-32	-32	-26	-31	-23	-16	-23	-26	-30	-26	-10	-7	0	-3	-18	-10.9
Grafton	Maximum...	1	-1	-3	3	7	-1	0	34	27	39	35	10	39	39	10	7	-13	-12	-14	-20	-4	-4	-14	-10	-8	3	7	13	12	11	8	6.4
	Minimum...	-10	-19	-16	-25	-11	-18	-12	-15	16	9	9	4	-15	-4	1	-13	-32	-30	-27	-31	-26	-17	-20	-16	-27	-22	-8	-2	0	-2	4	-12.5
Grand Forks Airport ³	Maximum...	-4	-2	2	2	-1	-9	5	35	34	36	22	4	37	36	9	7	-19	-14	-19	-19	-4	-11	-10	-10	-5	-1	7	14	15	10	4	4.9
	Minimum...	-6	-22	-15	-18	-17	-26	-16	-15	13	15	-1	-14	-14	2	-5	-25	-32	-30	-30	-27	-20	-17	-20	-20	-27	-22	-10	-5	3	3	-13	-14.0
Jamestown Airport ³	Maximum...	8	1	2	4	12	1	8	34	32	37	19	9	38	36	16	1	-15	-14	-16	-20	-6	-6	-12	-8	-4	-1	12	15	21	16	5	7.3
	Minimum...	1	-13	-20	-17	-11	-15	-15	15	23	9	2	-11	-11	15	0	-26	-33	-33	-27	-26	-21	-14	-18	-21	-28	-22	-12	-8	2	4	-16	-12.3
Kenmare ³	Maximum...	3	-8	5	13	6	18	26	40	35	39	16	27	42	35	26	-12	-16	-10	-22	-22	-13	-12	-15	-14	-8	1	2	6	8	4	11	6.8
	Minimum...	-1	-17	-21	-20	-13	-10	-12	14	21	37	13	-5	-2	26	24	-14	-31	-31	-28	-25	-35	-23	-31	-29	-30	-28	-22	-12	-5	-3	-16	-11.5
Langdon	Maximum...	3	3	0	-1	6	4	6	33	33	37	32	10	35	36	10	2	-10	-13	-12	-22	-10	-8	-14	-8	-11	-5	5	11	10	9	8	5.8
	Minimum...	-15	-28	-18	-28	-14	-23	-5	10	20	10	8	-11	-11	1	1	-15	-38	-34	-33	-40	-30	-21	-27	-21	-32	-26	-12	-9	3	5	-14	-15.3
Marmarth	Maximum...	30	10	10	15	14	17	29	36	40	41	35	25	44	38	39	13	17	-6	-10	-18	-8	1	-3	4	8	21	83	27	16	8	21	17.4
	Minimum...	9	4	-17	-25	-20	10	7	3	29	20	11	0	5	30	13	-18	-23	-33	-25	-26	-20	-15	-15	-23	-29	-24	-2	4	5	-13	-19	-6.4
Minot Airport ³	Maximum...	6	-10	4	13	13	9	20	38	30	38	19	14	45	36	30	-5	-15	-10	-18	-24	-14	-12	-17	-11	-8	0	-1	6	5	6	3	6.1
	Minimum...	-11	-19	-11	-16	-9	-13	7	20	17	19	-1	-5	5	7	22	-6	-24	-31	-28	-28	-33	-26	-24	-28	-26	-28	-16	-8	-2	-4	-16	-11.2
Mott	Maximum...	29	20	9	19	20	16	28	39	41	42	32	27	45	44	38	18	16	-12	-6	-10	-6	3	-1	4	5	9	17	14	9	9	18	15.8
	Minimum...	11	-1	-12	-21	-20	-5	3	15	25	17	13	-12	-2	15	17	-40	-43	-36	-26	-24	-14	-19	-24	-31	-27	-7	8	0	-11	-10	-10	-10.4
Pembina Airport ³	Maximum...	2	-7	-8	-6	-7	-5	3	36	36	40	22	2	37	25	6	3	-16	-10	-18	-23	-8	-16	-14	13	-9	-2	3	13	12	2	4	4.1
	Minimum...	-17	-26	-18	-20	-27	-14	-14	4	5	-1	-10	-10	-2	-10	-23	-32	-30	-30	-36	-23	-19	-26	-22	-20	-27	-7	1	-5	0	-10	-16.1	
Sharon	Maximum...	-1	-1	0	2	9	3	6	32	34	39	28	7	36	36	7	3	-18	-11	-18	-22	-7	-10	-14	-9	-5	0	5	11	16	12	5	5.7
	Minimum...	-4	-17	-12	-18	-12	-16	-9	-9	20	16	4	-9	-13	2	1	-19	-37	-34	-30	-27	-18	-19	-19	-30	-25	-11	-4	4	3	5	8	-12.2
Steele	Maximum...	13	8	6	3	5	0	14	35	33	37	32	11	38	36	25	9	-20	-20	-24	-26	-7	2	-8	-8	-5	0	4	14	8	9	5	6.8
	Minimum...	6	-12	-12	-19	-17	-15	-11	10	10	7	11	-13	-12	25	9	-20	-38	-41	-37	-30	-26	-14	-22	-23	-35	-20	-14	12	2	-2	-20	-13.2
Valley City	Maximum...	11	10	4	3	8	5	8	28	35	40	35	15	36	39	18	13	-10	-15	-15	-4	5	7	-8	-2	0	9	15	24	25	17	10.2	
	Minimum...	2	-8	-5	-16	-10	-8	-14	14	16	14	15	7	14	15	9	-10	-29	-29	-25	-23	-12	-15	-17	-26	-23	-11	3	9	11	-15	-8.8	
Wahpeton	Maximum...	16	15	5	2	7	4	7	26	34	33	33	15	26	38	16	16	7	-10	-12	-14	0	0	-4	3	-4	-1	14	17	29	28	17	11.1
	Minimum...	5	-7	-10	-22	-21	-15	-19	-19	22	16	13	-10	-15	8	3	9	-34	-29	-31	-26	-20	-14	-20	-15	-27	-22	-9	10	9	4	-1	-10.7
Williston ¹	Maximum...	17	-5	3	9	12	20	26	38	36	38	21	20	42	36	31	7	-20	-15	-18	-22	-15	-9	-									

Daily Precipitation for January 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total					
Eastern Division																																						
Casselton	Red	T.		.22						T.				T.		.09					T.	.06											.01	0.38				
Cooperstown ²	Sheyenne	T.		.08						T.				T.		.05					T.	.08	T.									.14		0.35				
Courtenay	James			.17						T.				T.		.02					T.	.01												0.19				
Devils Lake ¹	Devils Lake	.02	T.	.04	T.	T.	T.	T.	T.	T.	T.	T.	T.	.07	.01	T.	.02	T.	T.	T.	.01	.04	.01	T.	.07	T.	T.	T.	T.	T.	.10	T.		0.39				
Edgeley	James			.11						.02						.33						.13	.01	T.									.06		0.65			
Edmore	Devils Lake	.01												.05	.04	.17	.03			.02	.02	.01	.01			.10						.02		0.22				
Ellendale	James	.03		.34					.01	.01												.02	.02	T.	.06								.16		0.89			
Fargo ¹	Red	.01	T.	.01	T.				.02	.02		T.		.10	T.	.06	T.				.01	.05	T.	T.	.03								.10	.02	0.33			
Forman	Sheyenne	T.	T.	.33					T.					T.		.22					.02	.28			.07								.10		0.44			
Fullerton	James	.09	T.	.38					.02	T.				T.	.03	.22	.07			.02	.02	.02	.28		.14							T.	.06	1.33				
Grafton	Red	T.	T.						T.			T.			T.	.04	.04	.01	T.			.07	.02	.01	.05	.24						T.	T.	T.	0.31			
Grand Forks Airport ³	do	.02	T.	T.						.09				.06	T.	.04	.04	.01	T.			.01	.03	.02	.01	.05						T.	T.	T.	0.29			
Hankinson ²	do																						.10												0.33			
Hannah	Pembina	.15	.02	T.												T.	T.					T.	.08									T.	T.		0.25			
Hillsboro	Red	T.		.02						.01	.02		.01	.01	.06	.04	.02					T.	.08	T.	.01	.01							.03	.06	T.	0.37		
Jamestown Airport ³	James	T.	.02	.12	T.				.01	T.				T.	T.	.01	.02	.01	T.		T.	.04	T.	.01	.04										0.63			
Langdon	Pembina	.04	T.	.01						.03					T.	.02	.01	.01					.02	.05	T.	.31							.01	.09	.03	0.02		
Larimore	Red			T.								T.			T.	T.	T.					.02	T.	T.											T.	0.33		
Lisbon	Sheyenne	.05	T.	.19										T.			.03	.01					.06	T.	T.									T.	T.	0.20		
Mayville	Red			.03					.01	T.				.03		.04	.01					.04			.02										T.	.02	0.33	
McHenry	James	.02		.05										.03		.03	.03					.04	.03												T.	0.43		
McLeod	Sheyenne			.11						.35				.02			.38									T.							.10	.03		0.86		
Oakes	James	T.		.34						.05						.11	.03						.10			.07								T.	T.	0.70		
Park River	Red	.09	T.	T.								T.			T.	T.	T.					.04	T.		.04								T.	T.	T.	0.17		
Pembina Airport	do	.03							.01	T.		T.			.05	T.	.02	T.				T.	.06	T.	.01	.08							T.	T.	T.	0.24		
Petersburg	do	T.													.09	.02						.04	.04		.01	.08										0.29		
Sharon	do	.01		.05					.01	T.					.05		.03	T.				.06	.01	.01	.02									T.		0.26		
Valley City	Sheyenne			.16						T.				.03		.06	.02					.03	.01		.01	.02								T.	.01	0.36		
Wahpeton	Red	T.	.01	.07						.02				.01	.07	.08	.01					.09												.04	.01	0.86		
Middle Division																																						
Ashley ³	Missouri	.03	.12	.39	T.					T.	T.				T.	T.	.28	.08	.01	T.		.02	.01	T.	T.	.24						.11	.08	T.	1.13			
Bisbee	Devils Lake									.03						.21	.02	.01	T.		.02	T.	T.	.06	.09							.09	.04	T.	0.75			
Bismarck ¹	Missouri	.02	.09	.06	T.					.03	.01											.02	T.	.04	.25										T.	0.75		
Bottineau ²	Mouse																																			0.61		
Carrington	James			.13													.07																		T.	0.23		
Carson	Heart	.10	.12	.28												.50	.10																			1.10		
Center	Missouri	.03	T.	.27	T.					T.	.03					.24						.07	.04	T.	.02	.16							.02	.22	.02	1.15		
Dogden Butte	Mouse															T.	T.	T.					T.	T.		.40									T.	0.68		
Drake ²	do	T.		.08	.02					.08													.07	.01	.14								.15	.04	0.59			
Dunseith	do	T.		T.						.06					.03	.02	.02	T.				.02	.06	.02	.22								.12	.22	0.79			
Eckman	do	T.								.07						T.	T.						.18	T.	.11	T.									.16	.05	0.52	
Energy	Missouri			.15						T.						.20										.07	.06								T.	.14	0.64	
Fessenden	James	T.		.20																		.04	.06												T.	0.77		
Fort Yates	Missouri	.16	.15	.20												.16						.04	.06												T.	1.09		
Foxholm (near)	Mouse	T.		.08						.03												T.	.07	.02	.10	.08										T.	.03	0.61
Gackle	James			.35						T.	T.				T.		.20	.07				T.	.15		.10	.05								.17	.02	0.96		
Garrison ³	Missouri	T.	.04	.06						.04						.06	.20	.03				.09	.04	.15	.03									.11	.13	.02	0.79	
Granville	Mouse	T.		.05						.04						T.						.10	.05	.05	.07											.03	0.96	
Hansboro	Devils Lake	.20								T.												.25		.04											.03	0.52		
Linton	Missouri	.15	.05	.24						.05	.03					.17	.05					.03	T.		.25	.05								.04	.04	1.10		
Maddock	Sheyenne	.09	.04	.36	T.					.02		T.				.16	.09					.03	.03	T.		.05								.06	.04	0.20		
Mandan ²	Missouri	.09	.04	.36	T.					.02		T.				.16	.09					.03	.03	T.		.05								.06	.04	0.20		
Max ²	do		.10													.05	.05																	.15	.09	0.64		
McClusky	do		.17																			.15			.18													

CLIMATOLOGICAL DATA

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

THE LIBRARY OF THE
UNIVERSITY OF ILLINOIS

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LII BISMARCK, N. D., FEBRUARY 1943 No. 2

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GENERAL SUMMARY

The warm weather over the southwest part of the state caused the Little Missouri river to break up unusually early. The break-up began on February 19th at Marmarth and on the 20th at Medora. Near Rhame the rapid run-off was the cause of numerous flash floods. These floods caused an estimated property damage and livestock loss running well over \$10,000. All other tributaries of the Missouri River were running bankful by the close of the month. The Missouri River at Bismarck rose 9.2 feet, but it did not break up. The bottom lands were flooded.

On the 8-9th a blizzard of mild proportions prevailed; no losses were reported. Again on the 15th blizzard conditions prevailed with no loss reported. On the 25th near blizzard conditions prevailed all through the afternoon in the northeast portion of the state and continued until near midnight. Two truck drivers on regular runs driving huge semi-trailer trucks from Fargo to Grand Forks met head-on 2 miles south of Grand Forks and were killed.

Because of the many days with light snowfall followed by melting, streets, walks, and highways became glazed in places during the last half of the month. Numerous accidents were reported.

M. S. C.

TEMPERATURE

The mean temperature for the state was 15.1°, or 5.4° above the 1892-1943 average for February. The mean temperature for the eastern division was 12.7°; for the middle division, 14.2°; and for the western division, 18.5°. The highest mean temperature was 25.1° at Marmarth, and the lowest, 7.8° at Pembina Airport, making a range in mean temperature of 17.3°. The absolute range was 94°, from 62° at Marmarth on the 21st, to -32° at Willow City on the 1st. The average daily deficiency in temperature for the state since January 1, 1943, is 2.4°.

PRECIPITATION

The average precipitation for the state was 0.50 inch, or 0.03 inch more than the 1892-1943 average for February. In the eastern division the average amount was 0.75 inch; in the middle division, 0.42 inch; and in the western division, 0.33 inch. The greatest monthly amount reported was 1.91 inches at Oakes; the least was 0.08 inch at Portal. The greatest amount recorded in any 24 consecutive hours was 1.15 inches at Oakes on the 3d. The accumulated excess in precipitation for the state since January 1, 1943, is 0.29 inch. The average snowfall was 6.4 inches.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	7	4	1	3	7	10	3	1	2	1	3	5	2	10	40	11	...	2	9	2	1	...	4	...	...	...	...	...	...	...	...
Lunar halos	1	1	2	1	6	2	5	1	2	1	2	1	1	1	1	1	...	1	2	1	...	...	...	...	...	...	...	...	...	...	...
Solar halos	1	1	2	1	6	2	5	1	2	1	2	1	1	1	1	1	...	1	2	1	...	...	...	...	...	...	...	...	...	...	...
Sleet	2	1	...	2	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thund'rsts .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.81	15	29.33	4	11.7	43	nw.	12	88	87	80	84	64	1390
Devils Lake	30.75	15	29.32	5	9.8	31	n.	27	90	95	82	90	62	1516
Fargo	30.78	14	29.33	3	13.6	43	n.	10	87	89	79	85	66	1517
Williston	30.76	15	29.25	4	7.5	28	w.	25	87	88	75	76	65	1361

† And other dates.

COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	10.0	62	-45	0.59	0.77	0.37	0.58	4.9	4	14	7	8	8
1893...	-0.3	52	-41	1.01	0.51	0.22	0.58	5.7	4	12	7	9	8
1894...	8.0	55	-54	0.28	0.23	0.16	0.22	2.3	8	14	7	9	8
1895...	5.9	65	-40	0.33	0.41	0.33	0.36	3.6	4	13	7	9	8
1896...	14.3	64	-50	0.56	0.29	0.38	0.41	4.3	3	12	9	8	8
1897...	6.1	52	-29	1.14	1.05	1.30	1.16	11.5	7	12	7	9	8
1898...	13.3	65	-40	0.46	0.46	0.46	0.46	4.5	3	13	8	7	7
1899...	0.4	60	-34	0.22	0.16	0.22	0.20	1.9	3	14	8	6	6
1900...	1.3	46	-45	0.20	0.55	0.66	0.47	4.5	4	12	9	7	7
1901...	7.1	60	-48	0.32	0.30	0.31	0.31	2.9	3	15	7	6	6
1902...	12.1	51	-31	0.73	1.10	1.12	0.98	6.7	6	10	6	12	5
1903...	3.1	46	-33	0.48	0.25	0.41	0.38	3.7	3	19	4	5	5
1904...	-2.1	52	-49	0.81	0.56	0.69	0.69	7.6	5	13	6	10	10
1905...	8.2	64	-42	0.25	0.31	0.37	0.31	2.9	2	19	4	5	5
1906...	9.8	57	-46	0.20	0.07	0.28	0.18	1.4	2	13	8	7	7
1907...	10.7	58	-38	0.36	0.21	0.42	0.33	2.8	3	15	7	6	6
1908...	13.8	62	-49	1.56	0.63	0.87	1.04	10.1	5	12	7	10	10
1909...	9.6	56	-34	0.28	0.36	0.37	0.34	3.7	4	11	7	10	10
1910...	3.4	56	-34	0.57	0.40	0.81	0.59	5.6	4	14	7	7	7
1911...	7.3	55	-50	0.84	0.74	0.52	0.70	8.0	3	15	8	5	5
1912...	11.8	48	-38	0.19	0.18	0.09	0.15	1.7	2	10	9	10	10
1913...	8.5	64	-33	0.08	0.09	0.09	0.09	1.0	2	12	9	7	7
1914...	1.0	57	-44	0.34	0.28	0.40	0.34	3.8	3	12	8	8	8
1915...	17.4	50	-47	1.32	0.27	0.26	0.62	6.1	3	9	5	14	14
1916...	6.4	55	-20	0.41	0.45	0.58	0.48	4.8	4	14	8	7	7
1917...	-0.7	61	-39	0.84	0.58	0.55	0.66	7.1	5	10	8	10	10
1918...	10.8	60	-48	0.20	0.16	0.29	0.22	2.3	3	13	9	6	6
1919...	7.7	58	-41	0.68	0.73	0.44	0.62	6.5	5	10	8	10	10
1920...	12.5	53	-40	0.38	0.25	0.28	0.30	3.2	3	11	9	9	9
1921...	19.9	64	-36	0.52	0.39	0.25	0.39	3.8	3	11	10	7	7
1922...	0.7	45	-33	1.41	1.17	1.00	1.19	12.8	5	13	6	9	9
1923...	4.1	48	-39	0.78	0.64	0.51	0.64	7.2	4	13	7	8	8
1924...	20.3	67	-40	0.39	0.43	0.35	0.39	4.2	3	14	6	9	9
1925...	16.5	62	-27	0.48	0.30	0.08	0.29	3.6	3	10	9	9	9
1926...	22.3	58	-39	0.47	0.44	0.31	0.41	3.7	4	9	9	10	10
1927...	13.3	50	-19	0.49	0.31	0.27	0.36	3.1	4	12	7	9	9
1928...	18.8	59	-31	0.13	0.06	0.15	0.11	1.2	2	14	8	7	7
1929...	2.8	44	-19	0.30	0.28	0.30	0.29	3.3	4	12	8	8	8
1930...	21.7	63	-44	1.41	1.15	0.97	1.18	11.7	6	11	8	9	9
1931...	28.0	62	-30	0.34	0.20	0.31	0.28	2.9	2	14	6	8	8
1932...	13.6	69	-31	0.30	0.37	0.30	0.32	4.3	3	12	9	8	8
1933...	7.9	58	-45	0.25	0.26	0.34	0.28	3.3	3	13	8	7	7
1934...	19.5	61	-30	0.08	0.04	0.07	0.06	0.7	1	13	8	7	7
1935...	24.0	63	-25	0.21	0.24	0.15	0.20	1.9	2	13	7	8	8
1936...	-12.9	43	-60	0.90	0.70	0.50	0.70	9.1	6	12	8	9	9
1937...	6.8	55	-35	0.83	0.40	0.25	0.49	6.6	4	12	9	7	7
1938...	7.2	60	-35	0.71	0.63	0.71	0.68	8.6	5	11	7	10	10
1939...	-0.8	51	-46	0.85	0.60	0.45	0.63	9.7	5	13	8	7	7
1940...	15.0	52	-29	0.63	0.59	0.60	0.61	7.8	7	5	8	16	16
1941...	12.2	57	-40	0.23	0.18	0.24	0.22	2.8	3	12	8	8	8
1942...	14.1	57	-30	0.19	0.30	0.58	0.36	4.6	5	6	9	13	13
1943...	15.1	62	-22	0.75	0.42	0.33	0.50	6.4	5	11	9	8	8
Period	9.7	69	-60	0.54	0.43	0.43	0.47	5.0	4	12	8	8	8

Climatological Data for February 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	47																C. Hayford.	
Cavalier	Pembina	894	33	10.2		46	19	-21	14	0.46	-0.06	0.20	10	5.4	7	12	4	12	nw.	City Light & Power Co.
Colgate	Steele	1,180	10							0.61		0.35	3	5.1	5	8	11	9	n.	M. H. Badger.
Cooperstown	Griggs	1,428	46	15.0	+7.2	46	27	-21	17	0.83	+0.43	0.22	10	9.9	6	10	13	5	nw.	R. J. Lockner.
Courtney	Stutsman	1,523	13							0.37	-0.24	0.20	9	4.0	2	17	6	5	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	11.0	+5.9	40	19	-17	24	0.41	-0.09	0.10	9	4.8	10	7	4	17	nw.	U. S. Weather Bureau.
Edgeley	LaMoure	1,568	42	16.1	+3.3	44	18	-20	11	0.73	+0.40	0.40	9-10	9.0	7	12	10	6	nw.	O. A. Thompson.
Edmore	Ramsey	1,524	19	9.8	+5.0	37	20	-27	14	0.12	-0.32	0.07	8-9	2.3	3	17	7	4	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	15.8	+2.7	42	21	-15	17	0.50	-0.04	0.20	3	6.0	7	11	5	12	nw.	J. E. Demmer.
Fargo	Cass	895	16	10.9	+2.7	41	20	-26	14	0.69	0.00	0.44	3-4	8.6	9	8	8	12	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	50	14.2	+4.3	40	21	-22	14	1.31	+0.77	0.80	3	15.7	3	14	10	4	nw.	Helge Dyre.
Fullerton	Dickey	1,439	45	16.0	+3.6	42	26	-14	17	1.00	+0.07	0.55	9-10	10.0	6	9	7	12	nw.	F. O. Alin.
Grafton	Walsh	827	51	12.2	+4.9	43	20	-23	14	0.64	+0.10	0.24	3	6.6	10	10	11	7	nw.	Dr. J. C. Lamont.
Grand Forks II	Grand Forks	830	52	10.0	+2.3	40	19	-27	14	1.07	+0.51	0.58	3-4	19.6	7	10	13	5	nw.	University of N. Dak.
Grand Forks Airport	Grand Forks	833	3	8.0		41	19	-28	14	1.66		0.73	9-10	23.3	11	7	9	12	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	14.0	-0.1	44	19	-20	14	1.02	+0.55	0.61	3-4	13.7	4	8	13	7	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	51	8.7	+6.1	40	19	-24	1	0.05	-0.54	0.05	25	0.5	1	6	12	10	sw.	A. E. Prior.
Hillsboro	Trall	901	43	12.8	+2.6	44	20	-24	14	1.02	+0.44	0.71	3-4	12.2	8	6	10	12	n.	Alfred Jahnke.
Jamestown	Stutsman	1,457	51	15.8	+5.9	43	21	-22	14							12	5	11	nw.	N. Dak. State Hospital.
Jamestown Airport	Stutsman	1,494	3	13.7		42	21	-23	14	1.38		1.11	9-10	13.1	9	7	12	9	nw.	U. S. Airway Comm. Sta.
Kensal	Stutsman	1,440	4	13.8		44	21	-22	17	0.43		0.22	9	4.9	7	11	8	9	nw.	U. S. Wildlife Refuge.
Langdon	Cavalier	1,615	47	11.4	+6.6	43	20	-22	17	0.40	-0.22	0.13	9	4.7	10	8	8	12	n.	V. Sturlaugson.
Larimore	Grand Forks	1,134	50	13.8	+6.1	42	18	-22	14	0.54	-0.04	0.22	22	6.8	4	8	6	14	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	39	14.7	+3.1	40	20	-27	14	0.76	+0.14	0.72	3	9.1	2	13	5	10	nw.	J. O. Halverson.
Mayville	Trall	975	47	12.6	+2.8	41	21	-24	14	0.72	+0.30	0.52	3	14.0	3	13	5	10	n.	H. B. Addicott.
McHenry (near)	Eddy	1,509	21	11.6	+6.2	41	26	-24	1	0.49	-0.01	0.25	9	8.9	7	10	9	9	nw.	C. E. Blasky.
McLeod	Ransom	1,075	32	13.6	+0.6	43	21	-27	14	1.34	+0.73	0.78	3-4	13.4	5	12	11	5	n.	J. G. Carlson.
McVie	Nelson	1,467	13							1.02		0.49	9	10.8	5	10	8	10	nw.	A. M. Casad.
Milnor	Sargent	1,117	4	11.0		38	20	-28	14	1.09	+0.60	0.72	3	14.7	3	13	9	6	nw.	E. W. Wilson.
Oakes	Dickey	1,318	14	14.4	+1.5	45	19	-26	14	1.91	+1.51	1.15	3	17.8	4	15	2	11	nw.	F. H. Murray.
Park River	Walsh	998	39	11.3	+3.6	42	21	-21	14	0.07	-0.33	0.04	3	0.8	3	16	5	7	nw.	E. J. Taintor.
Pembina	Pembina	789	69																	S. W. Douglas.
Pembina Airport	Pembina	795	4	7.8	+5.0	41	21	-26	14	0.13	-0.50	0.04	5	1.4	5	4	9	15	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	13							0.54	+0.16	0.24	9	6.3	5	12	9	7	nw.	T. M. Rykken.
Sharon	Steele	1,516	19	12.0	+2.5	40	19	-22	14	0.60	+0.24	0.19	9	6.9	9	6	9	13	nw.	Nels O. Greisheim.
Valley City	Barnes	1,245	37	16.0	+4.5	44	21	-28	14	0.89	+0.42	0.46	9	8.1	6	14	9	5	sw.	I. C. Robertson.
Wahpeton	Richland	962	51	14.3	+1.9	42	18	-23	14	0.71	+0.22	0.42	3	11.0	8	10	7	11	nw.	W. J. Cavanaugh.
Average for Eastern Division				12.7	+3.7	46	19	-28	14	0.75	+0.21	1.15	3	9.1	6	11	8	9	nw.	
Middle Division																				
Ashley	McIntosh	2,014	47	14.7	+3.3	41	21	-19	1	1.03	+0.54	0.70	9-10	10.6	7	10	11	7	w.	U. S. Airway Comm. Sta.
Beulah	Merced	1,797	29																	Peavey Elevator Co.
Bisbee	Towner	1,601	40	11.7	+5.2	44	26	-22	1	0.41	+0.05	0.18	11	5.0	4	10	7	11	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	18.7	+7.1	47	21	-23	1	0.48	+0.08	0.30	9-10	5.7	7	10	9	9	nw.	U. S. Weather Bureau.
Bismarck Airport	Burleigh	1,650	4	15.3	+6.8	47	21	-23	1	0.53	+0.09	0.34	9	5.8	8	10	9	9	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	51	9.5	+4.6	43	22	-25	24	0.25	-0.10	0.16	11-12	3.0	3	11	5	12	nw.	N. D. School of Forestry
Carrington	Foster	1,579	45	13.4	+4.5	41	26	-18	11	0.57	+0.20	0.46	9-10	7.0	4	12	6	10	nw.	Soo Line Agent.
Carson	Grant	2,500	31	18.5	+4.0	48	21	-18	10	0.48	+0.04	0.40	9	6.0	2	14	4	10	nw.	J. W. Evans.
Center	Oliver	2,100	5	17.4		48	21	-25	1	0.75		0.25	9	10.2	11	4	14	10	nw.	Fred L. Heinz.
Dogden Butte II	McLean	1,880	17	16.6	+3.5	44	21	-22	24	0.38	-0.18	0.20	14	4.0	3	9	4	15	nw.	R. L. Williams.
Drake	McHenry	1,634	14	13.6	+3.2	43	21	-18	17	0.28	-0.05	0.08	11	2.6	6	9	2	17	nw.	H. G. Kringen.
Dunseith	Rolette	1,682	47	12.5	+5.8	45	19	-14	21	0.62	+0.19	0.21	11	6.9	6	8	12	8	n.	Geo. Gehres.
Eckman	Bottineau	1,500	38	11.8	+4.0	42	26	-27	1	0.29	-0.07	0.15	11	3.0	4	11	7	10	nw.	E. R. Sherman.
Energy II	McLean	1,750	28	18.0	+3.7	48	19	-22	1	0.26	-0.19	0.10	9	4.0	3	8	9	11	nw.	H. S. Solenberger.
Fessenden	Wells	1,610	31	14.4	+4.7	43	26	-18	17	0.41	+0.09	0.10	9	5.2	6	17	5	6	n.	John V. Zuber.
Fort Yates	Sioux	1,670	43	19.6	+7.0	51	21	-19	1	0.67	+0.18	0.20	14	8.0	4	17	6	5	nw.	P. J. Jacobson.
Foxholm (near)	Ward	1,657	22	15.4	+3.4	42	20	-21	10	0.09	-0.40	0.05	22	1.3	4	7	9	12	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	13	13.7		38	21	-14	10	1.11	+0.73	0.62	9-10	12.4	8	11	10	7	nw.	A. H. Hout.
Garrison	McLean	1,925	66	14.6	+3.5	45	19	-18	1	0.21	-0.32	0.09	13-14	2.4	6	8	9	11	nw.	E. L. Vorechek.
Granville	McHenry	1,504	36	13.1	+3.1	44	26	-24	1	0.20	-0.24	0.08	22	2.4	5	14	9	5	nw.	Fred Roble.
Hansboro	Towner	1,597	35	10.2	+4.1	44	26	-20	24	0.34	-0.21	0.16	12	5.0	4	8	9	11	nw.	W. E. Disher.
Harvey	Wells	1,596	40							0.49	+0.03	0.09	9	5.3	11	4	8	16	w.	Orville Hokscho.
Leeds	Benson	1,515	3	12.6		39	26	-21	17	0.24		0.24	10	3.0	1	10	16	2	nw.	John Dalmage.
Linton	Emmons	1,711	26	17.4	+3.6	48	21	-20	1	0.43	-0.05	0.23	9	4.7	7	12	5	11	nw.	Wm. Heyerman.
Maddock	Benson	1,604	28	12.6	+2.4	41	26	-23	1	0.31	-0.07	0.09	11	3.7	5	5	16	7	nw.	A. T. Felland.
Mandan	Morton	1,750	29	16.0	+3.4	46	21	-18	1	0.55	+0.19	0.28	10	7.8	6	15	4	9	nw.	No. Gt. Plains Field Sta.
Max	McLean	2,093	14	13.4	+3.8	42	21	-20	11	0.43	0.00</									

Climatological Data for February 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer			
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear			Pt. cloudy	Cloudy	
Western Division																					
Alpha	Golden Valley	2,908	16	20	24.4	+8.2	55	21	-21	10	0.22	-0.25	0.14	9	2.6	4	22	3	3	w.	H. A. Bury.
Amidon	Slope	2,908	20	24.4	+8.2	55	21	-21	10	0.40	-0.10	0.20	22	4.0	3	14	5	9	w.	Stanley W. Bale.	
Beach	Golden Valley	2,759	37	20	18.8	+6.7	46	18†	-17	1	0.28	-0.12	0.16	14	5.0	6	16	7	5	nw.	Mrs. H. Russell.
Berthold Agency II	McLean	2,082	49	18.8	+6.7	46	18†	-17	1	0.28	-0.12	0.16	14	5.0	6	16	7	5	nw.	H. W. Case.	
Bowbells	Burke	1,958	14	13.7	+8.2	43	26	-23	10†	0.15	-0.28	0.07	14	1.8	3	4	6	18	w.	Charles Kaufman.	
Bowman	Bowman	2,872	28	23.3	+5.9	58	21	-16	10	0.20	-0.28	0.20	10	3.0	1	16	1	11	nw.	Oscar L. Erickson.	
Crosby	Divide	1,954	34	15.2	+5.7	41	26	-23	10	0.15	-0.21	0.05	8†	3.0	3	8	7	13	nw.	J. H. Phelps.	
Dickinson	Stark	2,543	50	18.6	+5.8	51	21	-18	10†	0.22	-0.21	0.10	14	4.4	5	14	3	11	w.	Leroy Moomaw.	
Dickinson Airport	Stark	2,577	3	19.8	...	49	21	-16	10	0.20	...	0.08	13	5.0	6	11	6	11	nw.	U. S. Airway Comm. Sta.	
Dunn Center	Dunn	2,191	43	20.0	+5.9	50	21	-18	10	0.28	-0.22	0.22	14	3.8	3	10	9	9	nw.	O. T. Evenson.	
Epping	Williams	2,224	32	16.8	+7.4	42	21	-26	10	0.12	-0.29	0.03	28	1.0	2	17	5	6	nw.	T. Beachler.	
Fairfield	Billings	6	6	...	...	...	...	...	...	0.27	-0.13	0.13	13	3.5	4	16	2	10	nw.	Mrs. Edith Larson.
Fryburg	Billings	2,790	24	23.0	...	53	21	-18	9†	0.54	+0.07	0.08	9†	5.9	10	7	10	11	nw.	Verne King.	
Golva	Golden Valley	2,781	3	22.0	...	58	21	-17	10	0.17	...	0.07	22-23	3.4	6	8	9	11	w.	U. S. Airway Comm. Sta.	
Halliday	Dunn	2,073	3	...	...	...	...	...	...	0.75	...	0.65	13-14	9.3	4	13	8	7	nw.	A. L. Gerhart.
Hettinger	Adams	2,675	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	J. A. Springer.
Kenmare	Ward	1,799	11	15.8	...	43	20†	-21	10†	0.33	-0.04	0.12	...	3.9	9	7	14	...	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	33	25.1	+7.9	62	21	-22	10	0.55	+0.11	0.39	9	6.3	4	12	9	7	nw.	S. P. Grane.	
Mary	McKenzie	...	14	...	...	...	...	...	...	0.24	-0.01	0.07	13	6.6	5	12	7	9	sw.	Fred Hartman.
Medora	Billings	2,271	27	...	...	...	...	...	...	0.16	-0.25	0.07	9	4.5	5	19	5	4	sw.	Ovide E. Grenier.
Mott	Hettinger	2,424	35	23.4	+9.3	53	12†	-16	10	0.42	-0.20	0.16	13-14	6.1	6	18	3	7	nw.	P. G. Wick.	
New England	Hettinger	2,400	48	23.2	+8.7	53	21	-8	9	0.74	+0.25	0.21	13-14	9.1	6	15	3	10	nw.	F. S. Sleight.	
New Hradec	Dunn	...	2	19.2	...	45	21	-20	10	0.40	...	0.15	13	4.1	9	17	2	9	nw.	Peter F. Fieck.	
Parshall	Mountrail	1,929	27	12.5	...	41	21	-27	1	0.15	-0.27	0.07	14	2.2	6	10	12	6	nw.	C. E. Shubert.	
Portal	Burke	1,954	37	12.0	+5.8	39	26	-26	10†	0.08	-0.32	0.08	8	1.0	1	8	12	...	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	37	12.6	+6.8	40	20†	-21	8	0.45	-0.01	0.13	14	8.2	4	9	12	7	e.	Geo. B. Gee.	
Richardton	Stark	2,467	26	21.4	+6.7	48	21	-17	10	0.95	+0.55	0.40	9	15.3	7	12	7	9	nw.	Assumption Abbey.	
Sanish	Mountrail	1,835	17	12.9	+4.3	44	19	-20	1†	0.17	-0.26	0.10	16	2.0	2	4	18	6	nw.	H. J. Bugge.	
Stanley	Mountrail	2,258	5	14.4	...	38	21	-21	10	0.50	...	0.16	9	8.6	4	7	12	9	nw.	Leroy Edwards.	
Tioga	Williams	2,279	14	...	...	...	...	...	...	0.10	-0.32	0.05	9†	1.5	2	12	6	10	sw.	B. V. Olson.
Trotters	Golden Valley	...	17	...	...	...	...	...	...	0.31	-0.06	0.10	8	5.0	3	4	17	7	nw.	Walter Grunewald
Van Hook	Mountrail	1,864	3	17.4	...	46	19	-19	10	0.17	...	0.10	13-14	2.0	3	14	9	5	nw.	Theo. S. Bjerke.	
Watford City	McKenzie	2,084	29	19.8	+6.1	46	21	-21	10	0.38	-0.04	0.14	13	6.2	5	13	8	7	w.	J. C. Zeller.	
Wildrose	Williams	2,258	15	...	...	...	...	...	...	0.36	-0.12	0.16	13	6.3	4	19	3	6	sw.	Fred E. Maucher.
Williston	Williams	1,878	63	16.4	+8.3	42	20	-19	10	0.38	-0.03	0.16	13	4.2	5	9	10	10	w.	U. S. Weather Bureau.	
Average for Western Division				18.5	+6.1	62	21	-27	1	0.33	-0.10	0.65	13-14	4.8	5	12	7	9	nw.	.....
Average for the State				15.1	+5.4	62	21	-32	1	0.50	+0.03	1.15	3	6.4	5	11	8	9	nw.	.....

Daily Temperatures for February 1943

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley 3	Maximum	21	30	25	28	26	22	39	20	15	2	22	19	6	17	17	28	27	35	39	39	41	34	32	16	27	38	36	27	...	...	...	26.0
	Minimum	-19	8	14	14	3	-6	10	8	-3	-15	-14	-2	-7	-16	-8	-2	-2	19	25	23	21	23	16	-9	2	-1	14	-2	...	...	...	3.4
Bismarck Airport 1	Maximum	21	32	29	30	29	24	32	19	12	0	25	24	7	21	19	34	28	40	44	40	47	34	33	13	29	43	37	28	...	...	...	27.6
	Minimum	-23	-3	5	15	-1	-10	10	6	-5	-18	-19	5	0	-13	-8	-8	10	5	19	25	23	27	13	-6	8	19	3	...	...	...	3.0	
Bottineau 5	Maximum	18	28	23	20	13	16	18	16	7	-2	8	8	3	8	5	30	20	31	42	35	36	43	20	22	23	40	35	17	...	...	...	20.8
	Minimum	-23	-3	16	1	8	-8	-2	10	-1	-22	-22	-4	-8	-12	-11	-16	1	7	8	11	16	27	8	-25	-25	-2	17	3	...	...	...	1.8
Carson	Maximum	32	32	30	29	28	31	42	28	3	0	32	23	10	27	30	36	27	41	41	41	48	37	32	25	31	40	36	28	...	...	...	30.0
	Minimum	-10	14	15	16	10	1	17	1	-7	-18	-14	5	4	-6	0	-3	11	18	26	20	25	25	15	-5	-3	8	25	6	...	...	...	7.0
Crosby	Maximum	8	26	26	21	23	27	25	11	7	0	19	27	15	28	25	27	30	35	39	39	38	33	26	19	26	41	40	25	...	...	...	25.3
	Minimum	-15	8	11	10	5	-2	8	6	-14	-23	-6	0	-1	0	-1	-5	13	18	25	26	22	14	-17	8	12	23	7	...	...	...	25.3	
Devils Lake 1	Maximum	16	33	25	21	22	14	19	16	10	-1	5	12	2	9	9	26	24	36	40	38	39	33	26	2	24	40	32	19	...	...	...	5.1
	Minimum	-15	8	10	2	-2	-8	2	10	-2	-16	-15	-3	-9	-16	-7	-3	3	15	24	22	26	21	-5	-17	1	-3	12	-5	...	...	...	21.1
Dickinson Airport 3	Maximum	27	35	31	30	25	34	36	23	-2	3	33	24	20	32	20	35	39	40	42	41	49	31	30	16	28	41	34	26	...	...	...	0.9
	Minimum	2	16	20	14	9	10	16	-2	-11	-16	-5	11	9	2	2	7	9	29	29	27	31	21	13	-2	18	12	19	-3	...	...	...	29.4
Dunn Center	Maximum	30	36	31	32	32	32	36	31	18	6	31	29	13	31	32	39	33	43	44	42	50	40	31	25	30	42	39	30	...	...	...	10.1
	Minimum	-15	1	20	14	18	7	12	9	-9	-18	-14	10	-5	-2	1	-10	9	4	27	27	26	28	18	-8	3	12	28	9	...	...	...	32.4
Fargo 1	Maximum	14	34	34	20	24	5	17	39	25	5	1	11	3	4	5	22	20	36	39	41	39	37	32	8	26	38	36	26	...	...	...	7.6
	Minimum	-21	3	20	1	-4	-15	1	6	5	-8	-17	-6	-18	-26	-12	-10	-11	13	21	18	19	22	8	-9	-4	-4	14	-2	...	...	...	22.4
Fessenden	Maximum	24	38	31	24	26	22	29	22	18	6	8	18	5	10	12	26	18	39	42	39	38	39	29	22	25	43	40	30	...	...	...	26.2
	Minimum	-18	9	17	7	8	-4	4	1	2	-18	-15	-16	-5	-16	-9	-3	0	13	26	24	27	11	15	-15	-4	0	28	12	...	...	...	2.6
Fullerton	Maximum	20	25	26	27	28	18	31	24	23	9	9	19	7	7	16	31	23	37	41	40	41	38	34	30	29	42	40	33	...	...	...	26.7
	Minimum	-14	1	12	11	10	2	5	6	9	-9	-10	-10	-3	-14	0	-6	2	12	26	27	21	21	-4	0	-4	32	10	...	...	...	5.4	
Garrison 3	Maximum	19	34	24	26	24	22	32	16	4	2	22	16	7	14	16	34	26	43	45	42	43	33	30	11	28	42	35	20	...	...	...	25.4
	Minimum	-18	6	11	10	0	-4	7	4	-10	-17	-15	3	0	-9	-3	-5	15	6	22	26	28	20	7	-12	7	14	16	-2	...	...	...	3.8
Golva 3	Maximum	30	40	30	33	29	37	40	28	-7	1	35	23	34	35	24	38	43	47	46	46	58	33	30	23	30	44	36	29	...	...	...	33.3
	Minimum	6	10	20	14	14	9	16	-7	14	-17	-1	15	13	14	2	11	9	22	29	28	31	23	13	6	12	15	20	-3	...	...	...	11.1
Grafton	Maximum	8	27	27	20	19	8	15	19	16	8	2	11	6	4	6	28	18	38	40	43	42	42	34	22	23	41	40	22	...	...	...	22.2
	Minimum	-21	1	19	6	5	-7	5	7	8	-7	15	-4	-11	-23	-9	-11	-8	7	17	25	21	32	22	-10	-3	2	21	-4	...	...	...	2.2
Grand Forks Airport 5	Maximum	11	30	27	16	23	4	12	22	21	3	0	10	-2	1	4	25	15	34	41	40	37	33	32	4	22	37	32	19	...	...	...	19.1
	Minimum	-22	-2	12	2	-4	-14	-7	10	1	-14	-18	-7	-20	-28	-16	-13	-10	9	12	18	18	16	-3	-17	-6	-6	9	-7	...	...	...	-3.1
Jamestown Airport 3	Maximum	21	29	26	23	27	22	36	21	14	2	4	16	5	12	12	32	24	40	41	39	42	38	30	8	28	40	36	25	...	...	...	24.1
	Minimum	-18	2	10	9	3	-4	2	8	-2	-13	-13	-2	-7	-23	-7	-7	-2	12	26	26	23	27	8	-11	3	2	16	1	...	...	...	2.5
Kenmare 5	Maximum	25	36	27	25	15	25	24	11	-4	5	22	18	9	22	22	30	31	41	41	43	42	32	25	24	29	43	33	20	...	...	...	25.2
	Minimum	-19	5	18	10	11	3	3	6	-9	-21	-21	3	-1	-6	3	3	8	16	24	27	29	28	19	-12	12	25	16	...	...	...	6.4	
Langdon	Maximum	12	35	30	20	12	11	15	15	10	6	12	14	7	6	9	33	23	35	42	43	42	37	33	20	20	40	40	24	...	...	...	23.3
	Minimum	-22	-1	19	4	-4	-15	-6	4	4	-16	-20	-6	-14	-18	-15	-4	-5	12	15	17	21	27	15	-22	-3	6	9	16	5	-0.8
Marmarth	Maximum	32	40	36	32	33	40	42	36	8	18	36	30	42	40	40	42	48	50	51	50	62	53	40	30	34	46	40	32	...	...	...	38.1
	Minimum	-9	0	16	7	15	5	7	8	-9	-22	-8	17	20	18	8	10	12	20	24	26	29	30	22	11	11	19	20	16	...	...	...	11.1
Minot Airport 3	Maximum	22	32	28	25	24	25	22	13	2	0	19	20	7	18	13	29	27	39	41	42	42	32	26	12	26	41	35	22	...	...	...	35.1
	Minimum	-14	12	10	12	2	0	8	1	-14	-20	-16	0	-4	-9	1	4	9	20	23	26	28	20	2	-14	10	13	16	-2	...	...	...	24.4
Mott	Maximum	32	37	35	33	33	39	43	33	10	7	36	53	26	32	36	40	37	44	45	45	53	47	35	24	30	46	40	33	...	...	...	35.0
	Minimum	-11	5	-11	15	22	4	12	9	-7	-16	-12	11	12	1	10	3	26	8	22	22	28	24	19	20	25	29	13	...	...	...	10.1	
Pembina Airport 3	Maximum	7	30	25	8	13	3	14	17	16	-1	-1	7	-3	5	5	19	20	37	39	37	41	35	30	6	20	40	32	13	...	...	...	18.2
	Minimum	-22	-4	4	1	-5	-13	-6	6	-3	-11	-15	-10	-16	-26	-13	-8	-8	9	15	24	22	27	8	-15	-1	-2	11	-2	...	...	...	-2.2
Sharon	Maximum	17	30	25	20	22	16	21	19	16	5	1	11	2	4	7	29	23	39	40	39	39	33	29	19	24	39	37	19	...	...	...	22.1
	Minimum	-19	4	20	2	-4	-9	-1	6	5	-10	-18	-7	9	-22	-8	-8	0	14	23	21	22	26	19	-15	-8	-6	19	2	...	...	...	22.1
Steele	Maximum	15	30	25	27	24	16	37	28	18	0	20	16	6	6	10	27	25	35	40	40	41	28	23	18	26	38	23	...	...	...	24.1	
	Minimum	-19	2	8	7	9	-8	10	6	0	-19	-20	0	-4	-19	-6	-9	-2	9	14	22	20	19	18	-17	-14	0	23	8	...	...	...	24.1
Valley City	Maximum	21	30	31	26	28	14	28	23	23	14	5	15	14	7	8	29	28	40	42	42	43	44	42	36	30	28	42	43	...	...	...	27.7
	Minimum	-17	0	19	8	12	-7	-3	8	14	-10	-11	-6	-6	-28	-4	-5	-3	10	24	25	25	23	24	-3	-8	1	29	12	...	...	...	4.4
Wahpeton	Maximum	18	35	35	25	28	23	22	33	31	21	4	14	8	0	5	27	26	42	39	38	41	38	36	34	28	35	38	31	...	...	...	27.1
	Minimum	-16	-1	24	5	12	-11	-1	7	20	-7	-16	-10	-13	-28	-12	-13	-9	11	20	19	17	21	-10	-6	-7	22	8	...	...	...	27.1	
Williston 1	Maximum	21	33	26	28	25	33	25	16	-6	-3	28	24	14	31	12	30	32	40	40	42	39	34	25	14	28	39	33	26	...	...	...	26.6
	Minimum	-10	12	10	14	14	5	10	-6	-15	-19	-9	9	9	9	6	-2	-																

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton	Red																																	
Cooperstown 2	Sheyenne			.14						.20	.22	.07				.12							.08											0.83
Courtenay	James			T.						.20	.20	.17											.09											0.37
Devils Lake 1 1/2	Devils Lake	T.	T.		.08	.01			T.	.10	T.	.06	.01		.04	T.	T.	T.	T.	T.			.09	.01	T.	.03	T.		.03	T.				0.41
Edgeley	James			.11						.07	.40	.07	.08		T.	.05												.02						0.73
Edmore	Devils Lake					.01				.07		.04																						0.12
Ellendale	James			.20						.08	.09	.02	.02		.07	T.																		0.50
Fargo 1 1/2	Red			.43	.01	T.				.07	.03	.05	.03		.04	T.						T.	T.	T.		.01								0.69
Forman	Sheyenne			.80						.45		.06			T.																			1.31
Fullerton	James			.37		T.				.55	.03	.02	T.			.03									T.									1.00
Grafton	Red			.24		.05				.28		.03				.02											.02							0.64
Grand Forks Airport 3 1/2	do			.35	.02	.04				.31	.38		.04		.05	.01						.23	T.			.20	T.		T.		.03			1.66
Hankinson 2	do			.22	.39				T.	T.		T.				.05																		1.07
Hannah	Pembina								T.	T.		T.	T.														.05							0.05
Hillsboro	Red			.69	.02	T.				.12	.02	T.	.05			.04								.05										1.02
Jamestown Airport 3	James			.08	T.	T.				.71	.40	.09	.04		.01	.01						T.	T.		T.					.02	.02			1.38
Langdon	Pembina				.01	.09				.13	.01	.01	.02			.04									.01	.07								0.40
Larimore	Red			.06		T.				.20						.06							.22											0.54
Lisbon	Sheyenne			.72						T.		.04	T.																					0.76
Mayville	Red			.52				.15			.05											T.	T.											0.72
McHenry	James			.04	T.	T.				.22	.03	.06			T.								.09				.03							0.49
McLeod	Sheyenne			.78						.18		.20				.12										T.		.06						1.34
Oakes	James																																	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ²Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³Data for 24 hours ending 12:30 a. m. C.S.T. †Precipitation measured with recording gage. *Precipitation included in the next following measurement T. Trace, or precipitation less than 0.01 inch [WBO, Minneapolis, 4-12-43-1050]

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LII BISMARCK, N. D., MARCH 1943 No. 3

GENERAL SUMMARY

The weather during the first three weeks of March was cold and stormy. From the 22d to the 31st mild weather prevailed. It was the coldest March since 1912 and considerable care and feeding of livestock was necessary. Sunshine was about 5% above normal and the average wind velocity was about normal. Precipitation was above normal in all three sections. The total snowfall was the greatest ever recorded in March, but one January and one November had greater amounts. During the severe blizzard from March 14th to 17th snow fell almost continuously and was blown into huge drifts, many of them 10 to 15 feet deep. Over the central part of the state the wind and snowfall were the greatest, causing the most hardship in this area. Highways were blocked and schools and many business places were closed. In some instances schools remained closed for more than a week due to a fuel shortage because branch line trains could not run to the coal mines. Busses did not operate for several days. With the change to warmer weather on the 22d, the heavy snow melted rapidly and before the close of the month much flooding occurred resulting in some livestock, grain, and hay losses, and many homes in Mandan, Mott, Beulah, and other towns were flooded. Main line trains and busses couldn't operate due to flooded highways and road beds. Complete flood report will appear in the April Climatological Data.

TEMPERATURE

The mean temperature for the state was 17.0°, or 6.8° below the 1892-1943 average for March. The mean temperature for the eastern division was 17.2°; for the middle division, 16.4°; and for the western division, 17.3°. The highest mean temperature was 23.4° at Marmarth, and the lowest, 9.9° at Hannah, making a range in mean temperature of 13.5°. The absolute range was 103°, from 77° at Mott on the 29th and McLeod on the 30th, to -30° at Westhope on the 5th. The average daily deficiency in temperature for the state since January 1, 1943, is 3.1°.

PRECIPITATION

The average precipitation for the state was 1.23 inches, or 0.44 inch more than the 1892-1943 average for March. In the eastern division the average amount was 1.08 inches; in the middle division, 1.37 inches; and in the western division, 1.23 inches. The greatest monthly amount reported was 2.43 inches at Jamestown Airport; the least was 0.32 inch at Golva. The greatest amount recorded in any 24 consecutive hours was 1.35 inches at Richardson on the 15th. The accumulated excess in precipitation for the state since January 1, 1943, is 0.73 inch. The average snowfall was 14.8 inches.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	2	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lunar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thund'rst'ms ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.73	2	29.38	30	12.2	43	nw.	17	87	87	70	67	64	1438
Devils Lake...	30.64	2	29.40	3	10.8	31	ne.	16	85	93	73	76	62	1522
Fargo	30.67	2	29.35	30	14.4	42	nw.	4	86	88	73	78	62	1469
Williston.....	30.75	2	29.36	30	8.6	30	n.	16	83	87	69	67	67	1451

† And other dates.

COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	24.2	66	-35	0.87	0.98	0.65	0.83	1.9	4	12	8	11	
1893...	13.9	68	-35	1.10	1.30	0.46	0.95	10.0	5	13	7	11	
1894...	24.8	69	-22	1.20	1.71	1.43	1.45	10.1	5	12	9	10	
1895...	23.2	75	-35	0.07	0.21	0.24	0.17	1.0	2	16	10	5	
1896...	15.7	70	-35	1.19	1.15	1.06	1.13	8.0	8	12	10	9	
1897...	11.9	58	-48	1.15	1.04	1.90	1.36	8.0	7	15	7	9	
1898...	21.3	79	-24	0.77	0.80	0.80	0.79	6.7	5	13	8	10	
1899...	7.5	72	-30	1.23	0.96	0.68	0.96	10.0	5	12	10	9	
1900...	20.3	77	-24	0.96	0.96	1.11	1.01	8.5	5	14	7	10	
1901...	25.3	85	-32	0.95	0.85	0.78	0.86	5.2	5	15	8	8	
1902...	27.4	65	-25	2.75	2.90	2.55	2.73	11.7	8	10	6	15	
1903...	22.1	80	-24	0.78	0.44	0.42	0.55	5.1	3	12	6	13	
1904...	18.2	64	-26	1.26	1.33	1.64	1.41	11.5	5	11	6	14	
1905...	32.5	81	-25	1.09	0.85	0.32	0.75	2.3	4	11	8	12	
1906...	18.5	67	-34	0.31	0.39	0.44	0.38	3.1	3	15	6	10	
1907...	23.1	83	-20	0.57	0.58	1.00	0.72	5.1	4	14	9	8	
1908...	21.1	68	-31	1.17	0.94	1.53	1.21	12.1	8	10	9	12	
1909...	24.0	61	-24	0.34	0.40	0.26	0.33	2.7	4	10	9	12	
1910...	41.3	90	-7	0.83	0.93	1.08	0.94	0.3	3	18	8	5	
1911...	30.6	78	-18	0.14	0.26	0.29	0.23	1.6	2	16	10	5	
1912...	15.4	65	-25	0.28	0.32	0.52	0.37	3.6	3	17	8	6	
1913...	17.2	70	-31	0.82	0.73	1.00	0.85	8.2	6	12	9	10	
1914...	25.5	76	-20	0.83	1.06	0.75	0.88	9.2	5	10	9	12	
1915...	22.9	63	-23	0.38	0.20	0.07	0.22	2.0	2	16	6	9	
1916...	20.3	69	-45	1.43	1.82	1.00	1.42	13.5	6	11	9	11	
1917...	22.2	67	-39	0.44	0.33	0.37	0.38	3.9	3	13	10	8	
1918...	35.0	82	-15	0.32	0.46	0.42	0.40	2.9	2	16	8	7	
1919...	17.8	67	-35	0.63	0.93	0.78	0.78	6.2	4	12	9	10	
1920...	22.4	67	-32	0.46	0.83	1.20	0.83	7.1	4	15	8	8	
1921...	25.2	75	-22	1.07	1.02	0.81	0.97	9.1	6	9	12	10	
1922...	25.8	60	-30	0.96	0.67	0.50	0.71	6.4	4	12	7	12	
1923...	18.3	65	-35	0.34	0.44	0.35	0.38	4.8	4	10	10	11	
1924...	25.5	58	-20	0.32	0.36	0.75	0.48	4.4	4	10	9	12	
1925...	27.4	75	-26	0.74	0.56	0.75	0.68	6.0	4	14	9	8	
1926...	25.8	83	-23	0.35	0.19	0.17	0.24	1.8	3	13	10	8	
1927...	30.4	77	-10	0.90	0.78	0.47	0.72	6.5	5	13	8	10	
1928...	28.1	85	-17	0.69	0.55	0.31	0.52	4.8	3	15	8	8	
1929...	30.5	77	-15	0.68	0.65	1.02	0.78	5.3	5	12	8	11	
1930...	26.1	62	-17	0.17	0.05	0.05	0.09	0.9	1	17	8	6	
1931...	25.7	63	-24	0.99	0.85	0.99	0.94	4.8	5	11	8	12	
1932...	18.9	64	-30	0.52	0.60	0.80	0.64	6.0	6	10	11	10	
1933...	28.5	70	-14	0.46	0.41	0.49	0.45	3.7	3	14	10	7	
1934...	26.3	74	-12	0.43	0.34	0.71	0.49	3.6	4	11	11	9	
1935...	26.3	75	-37	2.00	0.89	0.90	1.26	7.0	5	9	11	11	
1936...	25.4	61	-27	0.73	0.75	0.94	0.81	8.1	6	10	11	10	
1937...	24.8	72	-20	0.42	0.34	0.42	0.39	4.3	3	12	11	8	
1938...	33.1	72	-14	0.63	0.57	0.58	0.59	2.5	4	13	10	8	
1939...	23.3	81	-29	0.33	0.41	0.42	0.39	5.3	3	16	8	7	
1940...	23.1	64	-26	1.19	0.71	0.72	0.87	9.1	7	9	9	13	
1941...	24.5	68	-25	0.65	0.64	0.46	0.58	6.8	5	11	8	12	
1942...	30.0	66	-8	2.77	1.72	1.01	1.83	12.8	9	9	8	14	
1943...	17.0	77	-30	1.08	1.37	1.23	1.23	14.8	7	11	11	9	
Period	23.8	90	-48	0.82	0.78	0.76	0.79	6.2	5	12	9	10	

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Climatological Data for March 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy				
Eastern Division																					
Casselton	Cass	961	47	19.4	-5.3	68	30	-13	5†	0.77	+0.28	.....	9.0	5	22	4	5	s.	C. Hayford.	
Cavalier	Pembina	894	33	14.8	.....	54	25	-21	5	1.42	+0.71	1.04	16	16	2	12	nw.	City Light & Power Co.		
Colgate	Steele	1,180	10	.....	.....	.....	.....	.....	.....	0.52	.....	0.30	16	4	2	14	5	nw.	M. H. Badger.	
Cooperstown	Griggs	1,428	46	19.6	-4.7	62	29	-17	7	0.82	+0.19	0.32	16	9	4	11	6	nw.	R. J. Lockner.		
Courtenay	Stutsman	1,523	13	.....	.....	.....	.....	.....	.....	0.78	-0.33	0.28	14†	10	5	18	6	w.	G. H. Hanawalt.	
Devils Lake	Ramsey	1,478	46	15.8	-4.0	51	29	-17	7	0.49	-0.29	0.29	15-16	4.9	6	6	9	16	nw.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	42	19.4	-7.9	67	30	-15	2†	0.97	+0.26	.....	11.7	5	6	16	9	nw.	O. A. Thompson.	
Edmore, 1½ miles W.	Ramsey	1,524	19	14.0	-7.1	49	24	-24	5	0.61	-0.07	0.45	15	7	22	5	4	nw.	Mike Davis.		
Ellendale	Dickey	1,457	48	19.8	-7.4	70	30	-12	2†	1.60	+0.69	0.61	15	18	7	13	6	12	nw.	J. E. Denmer.	
Fargo Airport, 2½ mi. NNW	Cass	895	16	17.6	-5.1	62	30	-13	5	0.85	-0.16	0.73	15-16	10.5	6	7	11	13	nw.	U. S. Weather Bureau.	
Forman	Sargent	1,249	50	19.5	-6.5	65	30	-19	2	1.02	+0.28	0.43	16	12	3	19	3	9	nw.	Holge Dyste.	
Fullerton	Dickey	1,439	45	19.8	-7.3	70	30	-13	7	2.05	+0.85	0.80	15	20	5	7	9	13	nw.	F. O. Alin.	
Grafton	Walsh	827	51	17.9	-3.8	52	25	-15	5	1.42	+0.77	.....	15.6	4	6	14	11	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	52	16.4	-6.1	50	30	-18	2†	0.92	+0.18	0.49	16	12	6	15	11	5	nw.	University of N. Dak.	
Grand Forks, 2 mi. WNW	Grand Forks	833	3	14.9	.....	48	30	-18	5†	1.16	.....	0.49	16	15	8	6	11	14	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	18.8	-9.8	67	30	-12	2	1.92	+0.91	0.86	16	23	5	13	5	13	nw.	Soo Line Agent.	
Hannah	Cavalier	1,568	51	9.9	-9.3	42	23	-26	5	0.75	+0.06	.....	7.5	6	3	15	13	sw.	A. E. Prior.	
Hillsboro	Traill	901	43	19.0	-6.3	63	30	-15	5	0.69	-0.06	0.51	16	10	1	9	9	13	nw.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	51	19.3	-5.1	64	30	-14	2†	1.61	+0.74	0.50	15	20	9	5	11	8	12	nw.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE	Stutsman	1,494	3	17.6	.....	63	29	-18	2†	2.43	.....	0.84	15	23	6	11	8	12	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SE	Stutsman	1,440	4	17.1	.....	61	29	-18	7	0.78	.....	0.31	15	7	3	12	10	9	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	47	14.8	-5.0	47	24†	-23	5†	1.14	+0.34	0.58	16	13	7	6	9	13	nw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	50	17.4	-5.3	53	24	-17	5	0.62	-0.15	0.31	16	6	2	11	4	16	nw.	W. L. Goodison.	
Lisbon	Ransom	1,091	39	19.8	-7.5	70	30	-14	7	2.03	+1.39	0.98	16	24	4	5	10	7	14	nw.	J. O. Halverson.
Mayville	Traill	975	47	19.4	-5.3	61	30	-15	5	0.65	-0.04	0.51	16	9	6	4	13	1	17	n.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	21	15.8	-7.2	55	29	-19	5	0.55	-0.10	0.35	16	6	3	15	5	11	w.	C. E. Blasky.	
McLeod, 3 miles E.	Ransom	1,075	32	17.4	-10.4	77	30	-20	2	0.93	+0.22	.....	9.3	6	14	9	8	sw.	J. G. Carlson.	
McVille	Nelson	1,467	13	.....	.....	.....	.....	.....	.....	1.48	.....	0.90	15	17	4	14	10	7	nw.	A. M. Casad.
Milnor	Sargent	1,117	4	14.4	.....	65	31	-16	7	1.30	+0.17	0.75	16	20	3	20	9	2	nw.	E. W. Wilson.
Oakes	Dickey	1,318	14	18.4	-9.3	67	30	-15	2	1.50	+0.62	0.53	16	20	4	6	14	4	13	nw.	F. H. Murray.
Park River	Walsh	998	39	15.6	-7.2	51	24	-19	5	0.85	+0.23	0.61	16	10	2	3	18	6	7	nw.	E. J. Taintor.
Pembina	Pembina	789	69	18.9	-4.5	48	25	-22	7	0.80	-0.01	0.36	15	11	0	4	7	15	9	nw.	S. W. Douglas.
Pembina Airport, 1 mile S.	Pembina	795	4	14.6	-3.8	52	24	-20	1	0.54	-0.27	0.36	15-16	7	4	2	16	13	nw.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,520	13	1.07	+0.43	0.87	15	11	0	2	14	10	7	nw.	T. M. Rykken.
Sharon	Steele	1,516	19	16.6	-7.6	57	30	-18	7	1.18	+0.64	0.53	15	12	6	7	15	9	nw.	Nels O. Grefshelm.	
Valley City	Barnes	1,245	37	20.8	-5.5	65	30	-12	7	1.06	+0.39	0.48	16	10	8	15	7	9	nw.	I. C. Robertson.	
Wahpeton	Richland	962	51	19.6	-8.0	67	30	-17	2	0.86	+0.21	0.56	16	15	7	8	10	7	14	nw.	W. J. Cavanaugh.
Average for Eastern Division				17.2	-7.0	77	30	-26	5	1.08	+0.26	1.04	16	12.9	5	12	9	10	nw.	.....
Middle Division																					
Ashley, 1½ miles SE	McIntosh	2,014	47	16.7	-8.2	67	30	-22	7	1.10	+0.31	0.53	15-16	14.8	8	12	5	14	n.	U. S. Airway Comm. Sta.	
Beulah	Mercer	1,797	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peavey Elevator Co.
Bisbee	Towner	1,601	40	16.7	-5.8	52	25	-21	1†	1.04	+0.31	.....	12.5	5	14	7	10	w.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	69	19.7	-5.5	60	30	-13	2	1.36	+0.45	0.50	15	15	7	8	9	14	nw.	U. S. Weather Bureau.	
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	4	18.6	-3.3	59	31	-12	2	1.31	+0.42	0.57	15-16	16.1	11	9	8	14	nw.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	51	12.0	-8.8	66	29	-29	7	0.92	+0.26	0.55	16	11	1	4	18	3	10	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,890	17	16.8	-9.6	55	30	-20	5†	2.09	+1.24	0.58	16	21	9	6	9	14	nw.	R. L. Williams.	
Carrington	Foster	1,579	45	14.8	-8.9	57	30	-16	7	1.10	+0.43	0.74	16	13	7	4	5	15	11	nw.	Soo Line Agent.
Carson, 2½ miles SW	Grant	2,500	31	18.0	-9.0	45	28	-23	2	1.25	+0.50	1.10	15	15	0	3	10	14	7	nw.	J. W. Evans.
Center	Oliver	2,100	5	17.3	58	31	-18	7	1.65	0.63	15	20	4	7	3	19	9	nw.	Fred L. Heinze.
Drake	McHenry	1,634	14	14.8	-9.9	54	29	-17	5†	1.33	+0.74	0.64	15-16	13.5	8	16	4	11	sw.	H. G. Kringen.	
Dunseith, 2 miles NNE	Rolette	1,682	47	13.2	-7.3	46	29	-25	5	1.55	+0.92	0.57	16	13	4	6	15	7	9	n.	Geo. Gohres.
Eckman	Bottineau	1,500	38	14.6	-8.4	52	29	-27	5	2.02	+1.49	0.70	15	20	5	12	11	8	nw.	E. R. Sherman.	
Fessenden	Wells	1,610	31	20.4	-5.9	56	29	-16	7	1.01	+0.26	0.21	13	12	1	5	18	5	8	nw.	John V. Zuber.
Fort Yates	Sioux	1,670	43	20.4	-6.8	71	30	-18	7	1.10	+0.35	0.48	16	14	8	4	20	3	8	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	22	16.3	-9.1	56	28	-20	5	1.64	+0.81	0.63	14	21	7	9	11	11	nw.	E. C. Bierbaum.	
Gackle	Logan	1,951	13	18.0	61	30	-19	2	1.34	+0.49	0.58	16	14	8	6	11	14	6	nw.	A. H. Haut.
Garrison	McLean	1,925	66	16.8	-7.6	57	30	-14	7	1.97	+1.12	0.81	15	21	9	8	7	15	9	nw.	E. L. Vorachek.
Granville	McHenry	1,504	36	16.9	-7.6	56	30	-19	5†	1.35	+0.85	1.01	16	15	6	7	18	6	7	nw.	Fred Rohle.
Hansboro	Towner	1,597	35	14.0	-6.7	51	24	-22	5	0.86	-0.08	0.39	16	10	6	5	17	4	10	nw.	W. E. Disher.
Harvey	Wells	1,596	40	.....	.....	.....	.....	.....	.....	1.29	+0.51	0.50	16	24	9	6	7	17	n.	Orville Hoksche.
Leeds	Benson	1,515	3	16.2	51	29	-20	2	1.20	0.50	15†	13	0	3	10	14	7	nw.	John Duhage.
Linton	Emmons	1,711	26	20.2	-7.8	66	30	-22	7	1.02	+0.23	0.36	16	12	6	7	12	8	11	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	28	16.9	-7.4	58	29	-19	5	0.94	+0.41	0.36	16	11	2	7	10	13	8	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	29	17.2	-9.6	57															

Climatological Data for March 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha, 1 mile S.	Golden Valley	2,908	16	21.8	-6.4	69	28	-19	7	0.63	-0.23	0.20	16	9.4	7	17	8	6	nw.	H. A. Bury.
Amidon	Slope	2,759	37	12.4	-6.8	54	28	-23	5	1.60	+1.09	0.54	16	19.4	6	13	6	12	w.	Stanley W. Bale.
Beach	Golden Valley	1,958	14	12.4	-6.8	54	28	-23	5	1.60	+1.09	0.54	16	19.4	6	13	6	12	w.	Mrs. H. Russell.
Bowbells	Burke	2,872	28	18.6	-9.7	75	29	-18	6	0.70	+0.03	0.54	16	9.0	6	16	2	13	nw.	Charles Kaufman.
Bowman	Bowman	2,954	34	15.0	-8.8	54	30	-20	21	1.21	+0.54	0.80	14	16.2	5	10	7	14	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	34	15.0	-8.8	54	30	-20	21	1.21	+0.54	0.80	14	16.2	5	10	7	14	nw.	J. H. Phelps.
Dickinson, 1 mile NW	Stark	2,543	50	16.2	-9.3	70	28	-18	27	0.74	0.00	0.23	14	9.0	8	16	4	11	nw.	Leroy Moomaw.
Dickinson Airt., 5 1/2 mi. S.	Stark	2,577	3	18.8	-9.3	69	28	-17	2	0.70	0.00	0.36	14-15	7.1	9	8	11	12	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	43	18.0	-8.0	62	28	-17	27	0.93	+0.10	0.26	16	12.0	7	9	14	8	nw.	O. T. Evenson.
Elbowwoods	McLean	2,082	49	18.9	-7.3	60	28	-15	7	1.11	+0.55	0.37	14	17.5	6	14	10	7	nw.	H. W. Case.
Epping	Williams	2,224	32	16.2	-10.8	60	28	-23	27	1.53	+0.94	0.58	16	15.1	5	19	9	3	nw.	T. Beachler.
Fairfield, 9 1/2 miles N	Billings	2,790	24	20.2	-4.9	71	28	-16	2	0.78	0.00	0.22	14	6.6	8	10	15	6	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	24	20.2	-4.9	71	28	-16	2	0.78	0.00	0.22	14	6.6	8	10	15	6	nw.	Verne King.
Golva, 1 mile E	Golden Valley	2,781	3	20.0	-4.9	72	28	-18	7	0.32	0.00	0.12	26	4.4	6	4	15	12	w.	U. S. Airway Comm. Sta.
Grassy Butte, 8 miles NNW	McKenzie	2,073	3	20.0	-4.9	71	28	-16	2	0.78	0.00	0.12	26	4.4	6	4	15	12	w.	Fred Hartman.
Halliday	Dunn	2,675	35	14.2	-5.4	76	29	-16	18	0.72	+0.77	0.58	16	15.1	4	17	8	6	nw.	A. L. Gerhart.
Hettinger	Adams	2,799	11	14.2	-5.4	76	29	-16	18	0.72	+0.77	0.58	16	15.1	4	17	8	6	nw.	J. A. Springer.
Kennmare	Ward	2,714	33	23.4	-5.4	76	29	-16	18	0.72	+0.77	0.58	16	15.1	4	17	8	6	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,271	27	21.8	-5.8	77	29	-20	7	0.68	-0.36	0.35	15	8.4	7	11	7	13	nw.	S. P. Grane.
Medora	Billings	2,424	35	21.2	-4.9	71	28	-16	27	1.70	+0.42	0.33	15	13.8	4	17	7	7	sw.	Ovide E. Grenier.
Mott	Hettinger	2,400	48	19.2	-5.8	77	29	-20	7	0.68	-0.25	0.24	16	8.1	8	20	4	7	nw.	P. G. Wick.
New England	Hettinger	2,400	48	19.2	-5.8	77	29	-20	7	0.68	-0.25	0.24	16	8.1	8	20	4	7	nw.	P. G. Wick.
New Hradec, 1 mile E	Dunn	1,929	27	13.6	-7.8	54	28	-26	51	1.86	+0.92	0.19	15	18.9	5	15	10	6	se.	F. S. Sleight.
Parshall	Mountrail	1,954	37	10.6	-13.1	50	29	-20	47	1.56	+0.92	0.19	15	18.9	5	15	10	6	se.	Peter F. Ficek.
Portal	Burke	2,205	37	12.4	-13.1	50	29	-20	47	1.56	+0.92	0.19	15	18.9	5	15	10	6	se.	Peter F. Ficek.
Powers Lake	Burke	2,205	37	12.4	-13.1	50	29	-20	47	1.56	+0.92	0.19	15	18.9	5	15	10	6	se.	Peter F. Ficek.
Richardton, 1 1/2 miles N	Stark	2,467	26	19.5	-7.7	67	28	-17	2	2.25	+1.53	1.35	15	29.0	7	9	14	8	nw.	U. S. Customs Service.
Sanish	Mountrail	1,835	17	12.6	-12.2	56	30	-21	7	1.18	+1.10	0.72	17	14.0	5	17	1	13	nw.	Geo. B. Gee.
Stanley	Mountrail	2,258	5	13.6	-5.3	53	28	-22	27	1.86	+0.56	0.60	16	23.5	6	12	12	7	w.	Assumption Abbey.
Tioga	Williams	2,279	14	13.6	-5.3	53	28	-22	27	1.86	+0.56	0.60	16	23.5	6	12	12	7	w.	H. J. Bugge.
Trotters	Williams	2,279	14	13.6	-5.3	53	28	-22	27	1.86	+0.56	0.60	16	23.5	6	12	12	7	w.	Leroy Edwards.
Van Hook	Golden Valley	1,864	3	13.6	-5.3	53	28	-22	27	1.86	+0.57	0.60	14	12.5	4	13	10	8	se.	B. V. Olson.
Watford City	Mountrail	2,084	29	19.7	-6.5	61	29	-22	2	1.86	+0.49	1.25	15	15.3	9	2	24	5	se.	Walter Grunewald.
Wildrose	Mountrail	2,084	29	19.7	-6.5	61	29	-22	2	1.86	+0.49	1.25	15	15.3	9	2	24	5	se.	Walter Grunewald.
Williston	McKenzie	2,258	15	18.2	-4.7	60	28	-17	5	1.71	+1.18	0.67	16	27.0	7	12	13	6	nw.	V. L. Snyder.
	Williams	1,878	63	17.3	-8.2	77	29	-23	27	1.23	+1.02	0.61	15-16	16.3	8	6	13	12	nw.	J. C. Zeller.
	Williams	1,878	63	17.3	-8.2	77	29	-23	27	1.23	+1.02	0.61	15-16	16.3	8	6	13	12	nw.	Fred E. Maucher.
Average for Western Division				17.0	-6.8	77	29 1/2	-30	5	1.23	+0.47	1.35	15	15.0	7	13	10	8	nw.	U. S. Weather Bureau.
Average for the State				17.0	-6.8	77	29 1/2	-30	5	1.23	+0.44	1.35	15	14.8	7	11	11	9	nw.	

Daily Temperatures for March 1943

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum..	-1	6	31	31	6	5	10	23	15	23	33	39	25	15	13	3	12	16	19	22	33	40	44	50	45	34	26	53	61	67	50	27.4	
	Minimum..	-14	-18	5	-9	-13	-17	-22	-3	-3	-8	12	13	10	11	2	-5	0	-7	-5	-7	-3	15	17	31	35	24	20	25	35	34	32	6.0	
Bismarck Airport ¹	Maximum..	2	13	37	28	4	8	13	18	20	31	33	32	26	14	12	3	13	19	26	24	38	43	47	52	47	38	29	53	58	59	59	29.0	
	Minimum..	-7	-12	13	-4	-10	-9	-12	0	-5	-2	18	17	10	8	2	-2	3	-9	-1	-6	-4	17	19	32	28	26	22	24	35	32	32	8.2	
Bottineau ⁵	Maximum..	-10	10	32	8	2	-3	5	15	15	20	27	25	30	12	10	3	10	18	20	20	30	37	46	52	47	34	35	45	66	45	37	24.0	
	Minimum..	-23	-26	-23	1	-28	-23	-29	-7	-12	-16	-9	-1	-10	-4	-1	-3	-3	-6	-3	-9	0	8	19	26	33	18	16	19	35	35	25	0.0	
Carson	Maximum..	8	10	37	29	0	3	14	20	21	30	33	46	32	16	8	0	10	20	22	30	37	47	52	45	32	32	65	64	56	59	29.8		
	Minimum..	-13	-23	4	-5	-15	-20	-19	5	-5	-2	11	16	14	4	-4	-5	-5	-13	-2	-2	8	14	21	29	30	22	20	24	37	39	29	6.3	
Crosby	Maximum..	7	12	34	33	2	11	13	14	18	27	29	31	19	6	7	3	6	16	23	25	34	39	43	48	44	33	28	53	42	54	45	25.8	
	Minimum..	-14	-20	11	-10	-20	-15	-18	3	-2	4	11	8	-5	-6	-3	-3	0	-11	-12	-8	0	13	20	30	32	22	20	25	31	33	25	4.3	
Devils Lake ¹	Maximum..	-2	6	32	26	2	4	9	14	20	24	28	31	9	15	10	7	11	20	23	23	32	39	47	49	48	34	26	43	51	43	41	24.7	
	Minimum..	-14	-16	3	-6	-14	-14	-17	0	-5	0	12	7	-3	-2	5	0	1	-1	-10	-1	3	19	27	32	29	25	19	23	32	33	26	7.0	
Dickinson Airport ³	Maximum..	1	19	36	22	2	4	19	18	20	32	32	42	29	8	4	5	11	14	28	33	35	44	48	54	44	34	38	69	60	58	54	29.6	
	Minimum..	-12	-17	19	-10	-14	-13	-12	0	-1	1	13	19	8	1	-4	-5	-1	-9	-2	-1	12	19	25	35	26	24	23	33	35	33	29	8.1	
Dunn Center	Maximum..	11	12	39	37	3	6	17	18	25	30	34	35	32	10	8	2	11	18	25	30	40	44	47	52	50	38	35	62	57	56	57	30.4	
	Minimum..	-13	-17	11	-7	-14	-12	-17	7	-2	-13	10	11	7	-1	-2	-4	-1	-14	-12	1	1	8	19	30	34	25	20	20	33	35	27	5.5	
Fargo Airport ¹	Maximum..	-2	8	25	31	3	6	10	14	16	23	32	33	24	22	20	16	10	18	24	27	26	36	43	44	47	37	28	38	55	62	51	26.7	
	Minimum..	-10	-13	-2	-5	-13	-7	-13	-1	-10	-5	13	13	3	18	14	2	4	2	7	2	-8	14	26	27	31	28	20	25	35	33	32	8.5	
Fessenden	Maximum..	13	8	31	34	10	3	12	15	20	22	31	29	29	15	15	8	11	17	21	25	35	40	45	48	48	39	33	47	56	54	50	27.9	
	Minimum..	-12	-14	4	0	-15	-12	-16	-1	-8	-4	16	10	0	3	5	-2	-1	-2	9	-2	3	18	23	33	34	25	22	23	36	32	30	7.6	
Fullerton	Maximum..	10	7	30	32	10	6	12	19	18	32	33	35	28	18	19	9	12	20	22	24	30	39	44	49	48	39	34	45	53	50	55	29.3	
	Minimum..	-8	-11	3	9	-5	-9	-13	1	-3	2	15	17	10	14	9	-1	-1	-3	13	0	2	9	23	32	33	28	21	25	35	33	25	10.2	
Garrison ³	Maximum..	1	13	36	21	5	6	14	17	26	27	31	30	10	10	5	3	11	19	27	26	35	42	47	50	43	37	27	53	55	57	52	27.0	
	Minimum..	-10	-13	13	-9	-13	-10	-14	-7	-9	-6	15	10	2	0	0	-3	3	-10	-1	-2	0	18	22	32	28	25	22	25	37	35	28	6.7	
Golva ³	Maximum..	3	22	39	22	4	8	25	24	24	34	39	49	32	13	5	11	10	22	29	39	41	49	51	57	45	30	48	72	70	59	59	33.4	
	Minimum..	-15	-17	20	-15	-14	-15	-18	-1	-3	-3	12	17	8	1	-6	-5	-6	-16	-11	8	15	19	24	33	26	23	22	35	33	29	27	6.7	
Grafton	Maximum..	5	9	27	29	13	6	11	16	25	25	32	32	29	19	18	12	8	26	27	28	30	34	50	51	52	45	33	38	48	45	45	45	27.8
	Minimum..	-14	-11	1	5	-15	-10	-13	1	-6	1	16	8	-5	2	6	6	3	3	12	0	1	11	22	31	32	27	15	23	32	33	32	8.0	
Grand Forks Airport ³	Maximum..	-1	8	27	27	8	5	10	18	21	21	31	27	13	16	13	13	9	22	26	28	30	34	38	42	42	33	26	35	45	48	42	24.4	
	Minimum..	-15	-16	-4	-7	-18	-13	-18	-2	-14	-4	10	7	-5	7	9	5	3	1	6	-5	-3	11	19	26	31	22	15	25	34	34	25	5.4	
Jamestown Airport ³	Maximum..	2	4	34	30	5	8	12	16	19	28	29	34	21	15	12	10	11	24	26	21	32	39	46	49	48	40	29	47	63	62	53	28.0	
	Minimum..	-12	-16	4	-4	-13	-13	-16	-7	-12	-1	16	15	4	7	7	-1	1	-1	5	-4	-1	16	22	33	29	27	20	23	34	31	31	7.2	
Kenmare ⁵	Maximum..	0	16	36	1	5	5	13	15	20	27	30	28	12	5	4	3	10	20	25	27	35	45	48	48	42	34	33	51	49	54	40	25.0	
	Minimum..	-13	-16	-16	-5	-20	-20	-19	-6	-3	-2	1	9	-4	-7	-5	-5	-5	-6	-7	-1	0	19	22	29	33	25	21	22	31	32	26	3.5	
Langdon	Maximum..	15	4	27	28	9	10	10	15	25	25	30	29	20	12	12	9	12	25	33	29	32	37	44	47	45	37	32	34	47	39	39	26.1	
	Minimum..	-19	-19	-1	0	-23	-18	-23	-4	-9	-8	10	2	-11	-4	4	1	0	-5	8	-2	-1	20	22	27	23	22	12	19	29	32	27	3.6	
Marmarth	Maximum..	16	17	41	35	5	12	26	30	26	35	36	46	38	27	7	5	12	17	31	34	40	51	54	55	57	42	56	74	76	70	62	36.5	
	Minimum..	6	-10	16	5	-6	-13	-15	14	4	1	12	16	25	6	3	-3	0	-16	-10	5	10	18	23	25	34	25	32	80	40	26	10.5		
Minot Airport ³	Maximum..	0	15	36	19	4	4	15	15	19	27	28	27	12	8	3	4	12	22	23	25	35	38	44	48	47	33	28	53	52	54	43	25.6	
	Minimum..	-10	-16	-11	-14	-18	-12	-16	-2	-6	-4	11	9	2	-3	0	-2	2	-6	1	3	7	23	26	35	27	25	23	26	34	33	25	6.6	
Mott	Maximum..	16	15	41	38	5	8	22	19	24	34	38	44	38	21	12	7	13	17	27	33	39	53	54	58	55	36	50	73	77	63	72	35.5	
	Minimum..	-10	-18	-9	-3	-9	-16	-20	-8	-2	-5	14	30	18	4	0	-4	2	-13	-8	-2	5	13	22	30	32	25	23	35	37	40	28	8.0	
Pembina Airport ³	Maximum..	-4	6	23	20	6	3	10	14	22	25	30	27	4	17	12	9	10	22	24	27	32	35	48	52	49	31	25	31	42	44	23	5.8	
	Minimum..	-20	-14	-1	-10	-18	-14	-16	-6	-4	-5	15	0	-10	-3	7	3	2	2	10	0	6	14	24	30	31	19	13	25	33	34	19	5.4	
Sharon	Maximum..	2	7	28	25	4	7	10	15	22	23	31	30	34	13	12	7	10	22	26	23	32	37	47	52	50	36	29	34	56	57	48	26.4	
	Minimum..	-14	-16	-1	1	-16	-15	-18	-2	-3	-6	16	8	-3	4	6	1	0	-1	13	-2	3	17	24	30	32	24	17	22	33	32	30	6.8	
Steele	Maximum..	12	2	31	23	4	0	4	14	15	25	31	30	28	12	10	5	8	15	20	20	30	34	40	47	45	47	30	43	56	56	55	25.7	
	Minimum..	-17	-22	-4	-4	-22	-19	-27	-6	-12	-11	12	11	5	5	4	-8	-10	4	5	-10	-5	14	15	25	28	23	20	23	38	31	29	3.7	
Valley City	Maximum..	28	7	30	35	23	8	12	17	21	25	34	33	30	16	17	12	13	23	27	28	34	41	50	55	52	50	38	43	61	65	55	31.7	
	Minimum..	-10	-10	3	9	-8	-8	-12	0	-11	-4	17	14	3	10	9	4	0	3	14	2	-1	18	24	31	31	27	20	24	35	33	35	9.8	
Wahpeton	Maximum..	16	6	25	30	14	10	10	17	17	25	34	34	34	29	23	19	13	20	24	26	27	37	45	48	46	44	37	58	58	67	66	30.3	
	Minimum..	-11	-17	-4	12	-13	-9	-15	-3	-2	-4	14	13	10	21	16	2	1	-1	11	-2	-6	9											

Daily Precipitation for March 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton	Red								.11	T					.20	*	*	.46															0.77	
Cooperstown ²	Sheyenne								.11						.06	.30	.32	.14															0.82	
Courtenay	James								.01						.28	.28	.08	.03															0.78	
Devils Lake ¹	Devils Lake	T	T	T	T	T	T		.01	T		T	T	T	.04	.22	.15	.05	T	T									.02	T			0.49	
Edgeley	James	T							.06	*					T	*	.83												.08				0.97	
Edmore	Devils Lake														T	.45	.16													T			0.61	
Ellendale	James					.02			T						.36	.61	.20	T			.17								.09	T	.04		1.60	
Fargo ¹	Red	T	T	T	T	.01	T		.02	T	T		T	T	.11	.06	.56	.19	T		.01								T	T			0.85	
Forman	Sheyenne					T			.02	.03					.18	.22	.43	.14											T				1.02	
Fullerton	James	T				T		.02							T	.38	.80	.55	.15		.06								.09				2.05	
Grafton	Red									T	T						1.24	.18															1.42	
Grand Forks Airport ³	do	T			.10	T	T	T	.03		T	T			.09	.14	.49	.31											T	T		T	1.16	
Hankinson ²	do					T									T	.46	T	.86	.48	.10	.02	T							T	T			1.92	
Hannah	Pembina				.06					T					.02	*	*	.61											T	T	.06		0.75	
Hillsboro	Red	T				T	T		.04	T			T		.02	.10	.51	.02			.01								T				0.69	
Jamestown Airport ³	James					T	T			T			T		.09	.17	.84	.81	.51										T				2.43	
Langdon	Pembina				.08						.01				.01	.32	.58	.14												T			1.14	
Larimore	Red									T					.07	.12	.31	.12												T			0.62	
Lisbon	Sheyenne									T						.46	.46	.98	.10		T								.03				2.03	
Mayville	Red														.02	.10	.51	.02		T	T												0.65	
McHenry	James									T					.06	.14	.35	*	*										T				0.55	
McLeod	Sheyenne								.03						T			*	*		.90	T											0.93	
Oakes	James								.04						.45	.37	.53	.07	*	T													1.50	
Park River	Red								T	T					.02	.22	.61	T											T	.04	T		0.85	
Pembina Airport	do				.06	.01	T	T	T	T		T			T	.21	.26	T											T	T			0.54	
Petersburg	do									T					.20	.87	T																1.07	
Sharon	do	T				T	T				.01				.21	.53	.35	.07											T	.01			1.18	
Valley City	Sheyenne								.05	.03					.22	.20	.48	.04		.02									T	.02			1.06	
Wahpeton	Red						.01			T	.01				.13	.08	.56	.02		.03									T	.02	.02		0.86	
Middle Division																																		
Ashley ³	Missouri	T				.04			T	T				.11	.02	T	.47	.36	.02	T	.02												T	1.10
Bisbee	Devils Lake									T					*	*	*	*	1.04										T	.06				1.04
Bismarck ¹	Missouri	T				.01			T	T				.01	.06	.15	.49	.34	.05	.01	.01	T							.03	.15				1.31
Bottineau ²	Mouse					.03										.24	.55	.10	T														0.92	
Butte	do	T								T	T				.15	.12	.48	.56	.58	.20									T	T			2.09	
Carrington	James											T				.25	.74	.05	.06														1.10	
Carson	Heart	T													T	.04	1.10	T															1.25	
Center	Missouri	T							.10	T					.02	.11	.63	.47	.21	T										.11			1.65	
Drake ²	Mouse					.01				.05					.01	.25	.18	.64	.10	T	T									T	.09		1.33	
Dunseith	do					.08									.23	.36	.57	.19	T											T	.12		1.55	
Eckman	do														.05	.67	.70	.50												.10			2.02	
Fessenden	James														.24	.20	.22	.19	.16										T				1.01	
Fort Yates	Missouri														T	.32	.48	.32												.08			1.20	
Foxholm	Mouse								.01						.03	.31	.63	.30	.29											.07			1.64	
Gackle	James								.11						.04	.05	.26	.58	.30		T												1.34	
Garrison ³	Missouri								.09						.03	.28	.81	.34	.05											.05			1.97	
Granville	Mouse					.03			.03						.03	.05	.17	1.01												.03			1.35	
Hansboro	Devils Lake														.08	.34	.39	.03											T	.02			0.86	
Linton	Missouri					.01				T					.05	.04	.34	.36	.04											.18			1.02	
Maddock	Sheyenne									T					T	.08	.22	.36	.21	.02	.03									.02	.13		0.94	
Mandan ²	Missouri									T					.03	.28	.48	.53	T		T									.22	.13		1.67	
Max ²	do	T	.01							.03					.02	.40	.18	.20	.15											T	.05		1.07	
McClusky	do								.20						.07	.25	.35																1.00	
Minot Airport ³	Mouse								.04	T					.01	.16	.73	.50	.13											.07			1.71	
Mohall	do					.01			.02						T	.20	.40	.40	.10														1.62	
Napoleon ²	Missouri					.05									T	.20	.25	.15	.10	.08										.09			0.88	
New Salem	Heart								.07						.02	*	*	*	.97														1.17	
Pettibone	James					.10			.18						*	*	*	*	1.20														1.59	
Rolla	Devils Lake					.06	T			T	T				.13	.44	.49	.12	T											T	.11		</	

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LII

BISMARCK, N. D., APRIL 1943

No. 4

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GENERAL SUMMARY

The temperature averaged above normal in all sections of the state. There were only two warmer Aprils during the past 25 years. Precipitation was above normal in the northern part of the state and below normal in the extreme southern part. Nearly all of the precipitation occurred after the 20th. There was very little snow. Wind velocities were above average and a few dust storms were reported. Prairie fires also caused some damage. Plowing and seeding of small grain was getting under way by the close of the month. Grass was growing slowly. Livestock were in good condition. Much flooding was occurring at the beginning of the month in the southern part of the state and in the northeastern and north-central parts about the middle of the month.

FLOODS IN NORTH DAKOTA DURING MARCH AND APRIL 1943

More floods occurred and more property was damaged by the floods in North Dakota in the spring of 1943 than in any previous year in the climatological history of North Dakota.

Snow fell almost continuously over the entire state during the 4-day blizzard, from March 14th to March 17th. This snow was blown into huge drifts, many of them 10 to 15 feet deep, so it was hard to determine the average snowfall or the water content of the snow. However, many observers remarked that it was the heaviest snowfall ever experienced in their respective localities. Temperatures were not low during the blizzard so the water content of this very fine, hard packed snow was high. The average snowfall for the state in March was 14.8 inches. From March 22d to 31st, high temperatures and much sunshine prevailed and the snow melted rapidly. The ground was still frozen and a

(Continued on page 17)

TEMPERATURE

The mean temperature for the state was 44.9°, or 3.3° below the 1892-1943 average for April. The mean temperature for the eastern division was 44.0°; for the middle division, 45.1°; and for the western division, 45.5°. The highest mean temperature was 50.1° at Mott, and the lowest, 39.2° at Hannah, making a range in mean temperature of 10.9°. The absolute range was 72°, from 83° at four stations on the 21st, to -11° at five stations on the 1st, 2d, and 13th. The average daily deficiency in temperature for the state since January 1, 1943, is 1.5°.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)			Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	30.64	30	29.44	15	14.0	38	w.	24	66	76	44	74	544
Devils Lake...	30.58	30	29.44	15	11.5	34	nw.	4	66	81	42	77	658
Fargo.....	30.56	30	29.40	15	16.4	42	nw.	4	69	78	50	74	634
Williston.....	30.58	30	29.47	20	9.7	34	nw.	21	63	73	41	36	531

† And other dates.

PRECIPITATION

The average precipitation for the state was 1.48 inches, or 0.03 inch more than the 1892-1943 average for April. In the eastern division the average amount was 1.46 inches; in the middle division, 1.56 inches; and in the western division, 1.42 inches. The greatest monthly amount reported was 3.01 inches at Max; the least was 0.31 inch at Ashley. The greatest amount recorded in any 24 consecutive hours was 1.75 inches at Ryder on the 25-26th. The accumulated excess in precipitation for the state since January 1, 1943, is 0.76 inch. The average snowfall was 0.1 inch.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs.....	7	1										2													5	4	5	5			
Lunar halos..											1			1	1										1						
Solar halos..		2	1		1																				1			1		4	
Hail.....																															
Thunderstorms															1								1			2	3	2			

COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.6	75	-2	2.58	3.09	2.29	2.65	6.3	7	10	6	14
1893...	34.3	77	-8	2.45	1.56	1.09	1.70	7.8	6	7	9	14
1894...	42.8	92	12	3.66	2.93	2.50	3.03	4.4	9	8	10	12
1895...	49.6	87	10	2.10	2.38	2.20	2.23	0.0	5	13	8	9
1896...	40.1	92	2	5.50	3.73	2.18	3.80	5.1	9	9	8	13
1897...	40.8	93	7	0.80	1.20	1.24	1.08	1.1	5	12	8	10
1898...	41.9	87	-4	1.38	1.36	1.40	1.35	0.5	5	14	9	7
1899...	38.0	86	-22	1.46	1.31	1.31	1.36	6.3	6	12	10	8
1900...	49.3	93	11	0.75	0.75	1.05	0.85	T.	3	20	6	4
1901...	44.5	92	10	1.40	0.72	0.82	0.98	0.3	4	12	9	9
1902...	40.2	87	-2	1.35	0.88	0.95	1.06	2.9	3	12	8	10
1903...	42.5	83	8	1.67	1.10	0.92	1.23	2.7	5	16	6	8
1904...	37.4	91	2	2.22	1.21	0.72	1.38	8.1	5	13	5	12
1905...	40.2	83	3	1.04	0.38	0.11	0.51	3.7	3	15	8	7
1906...	46.7	88	8	1.96	1.06	1.48	1.50	1.3	5	14	7	9
1907...	31.9	80	-6	0.77	0.36	0.44	0.52	4.2	4	10	9	11
1908...	43.9	91	-19	1.12	1.53	1.91	1.52	5.9	5	16	6	8
1909...	34.2	80	3	0.95	0.71	0.64	0.77	5.1	6	10	9	11
1910...	48.0	96	4	1.52	1.03	1.56	1.37	2.9	4	16	8	6
1911...	41.5	90	-5	2.12	0.80	0.64	1.19	6.3	5	15	6	9
1912...	44.4	88	2	2.61	2.32	2.22	2.35	1.7	5	14	8	8
1913...	46.8	94	11	1.00	0.70	0.23	0.64	2.4	4	16	6	8
1914...	40.9	84	2	2.49	1.31	0.58	1.46	2.8	6	9	10	11
1915...	50.3	99	5	1.42	0.98	0.68	1.03	T.	5	15	8	7
1916...	39.2	79	-6	1.70	1.07	1.54	1.44	2.9	5	10	10	10
1917...	37.2	73	5	1.89	1.67	1.49	1.68	5.6	7	9	9	12
1918...	41.4	81	0	2.38	1.87	2.28	2.18	3.0	7	12	8	10
1919...	42.3	79	6	1.45	1.40	1.72	1.52	6.2	6	11	9	10
1920...	32.1	63	-11	0.73	0.67	1.12	0.84	2.1	5	13	8	9
1921...	41.1	91	1	1.84	2.07	1.40	1.77	3.8	7	14	7	9
1922...	42.3	89	-2	1.17	0.79	0.79	0.92	2.3	6	10	9	11
1923...	38.7	89	-15	1.22	1.63	1.51	1.45	7.2	5	13	8	9
1924...	39.3	84	6	3.94	2.31	1.35	2.53	7.5	9	8	9	13
1925...	47.8	85	10	2.21	1.37	1.22	1.60	T.	6	11	10	9
1926...	42.8	98	-4	0.17	0.34	0.32	0.28	0.9	3	17	8	5
1927...	41.4	95	7	2.05	1.46	1.67	1.73	2.3	7	10	8	12
1928...	35.9	84	-6	0.92	0.88	0.92	0.91	5.0	5	12	10	8
1929...	41.5	85	-9	1.68	1.36	0.88	1.31	3.4	6	12	9	9
1930...	47.3	86	8	1.16	1.14	1.45	1.25	0.5	6	14	7	9
1931...	44.1	87	3	0.75	0.37	0.18	0.43	0.7	2	18	8	4
1932...	44.1	79	0	2.50	2.09	1.84	2.14	0.7	8	9	9	12
1933...	40.0	84	-2	1.44	1.20	1.35	1.33	7.3	5	11	9	10
1934...	43.7	95	7	0.75	0.34	0.24	0.44	1.9	3	15	8	7
1935...	38.4	83	0	2.62	1.75	1.42	1.93	3.6	8	9	9	12
1936...	35.6	87	-15	0.53	0.26	0.37	0.39	0.5	4	14	10	6
1937...	40.7	79	2	3.44	1.56	1.06	2.02	5.8	8	8	9	13
1938...	42.8	90	-1	1.68	0.96	0.64	1.09	0.1	5	11	10	9
1939...	41.6	90	-1	0.93	0.66	1.03	0.87	0.8	6	12	9	9
1940...	37.8	78	-9	1.84	2.36	2.45	2.22	4.1	8	7	10	13
1941...	44.1	82	6	3.05	2.13	1.71	2.30	1.6	13	6	9	15
1942...	44.9	90	-6	2.12	1.75	2.01	1.96	3.3	7	11	9	10
1943...	44.9	83	11	1.46	1.56	1.42	1.48	0.1	5	15	10	5
Period	41.6	99	-22	1.77	1.35	1.24	1.45	3.2	6	12	8	10

Climatological Data for April 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	47	46.3	+4.7	78	21†	20	13†	1.38	-0.29	0.70	29	0	4	25	3	2	s.	C. Hayford.
Cavalier	Pembina	894	33	42.4	.....	73	23	14	2	1.19	-0.16	0.60	26-27	0	7	11	8	11	nw.	City Light & Power Co.
Colgate	Steele	1,180	10	.....	.....	.....	.....	.....	.....	2.11	.....	1.05	26	0	5	18	7	5	n.	M. H. Badger.
Cooperstown	Griggs	1,428	46	46.0	+5.7	80	21	17	2	2.34	+0.95	0.98	27	T.	4	17	9	4	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	13	.....	.....	.....	.....	.....	.....	1.77	+0.11	0.90	28-29	T.	4	16	6	8	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	43.0	+4.2	77	21	17	1	1.45	-0.07	0.98	26-27	T.	5	11	12	7	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	42	46.0	+3.4	78	21	17	13†	1.24	-0.53	0.34	26	T.	5	13	10	7	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	19	41.6	+2.3	76	21	14	2	1.70	+0.48	0.93	26	0	4	19	5	6	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	45.4	+2.7	76	21	19	13	1.06	-0.73	0.31	26	0	7	16	7	7	s.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	16	43.8	+3.2	78	21	19	2	1.05	-1.13	0.48	28-29	T.	5	11	12	7	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	50	46.3	+2.3	74	21	20	13†	0.80	-1.07	0.37	22	0	4	20	8	2	s.	Helge Dystve.
Fullerton	Dickey	1,439	45	46.0	+3.3	78	21	20	13†	0.88	-1.26	0.24	22†	T.	6	13	13	4	nw.	F. O. Alin.
Grafton	Walsh	827	51	44.0	+3.4	73	21†	15	2	1.71	+0.50	0.82	26	0	5	15	9	6	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	52	43.2	+1.9	75	21†	17	2	1.93	+0.31	0.95	27	T.	4	17	6	7	se.	University of N. Dak.
Grnd. Fks. Apt. 2½ mi. WNW	Grand Forks	833	3	41.5	.....	76	21	16	2	1.85	.....	1.26	26-27	T.	4	10	10	10	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	44.8	+1.3	77	21	13	1	0.79	-1.41	0.33	23	0	3	11	6	13	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	51	39.2	+1.3	72	21	12	1†	0.85	-0.19	0.40	26	T.	3	7	11	12	nw.	A. E. Prior.
Hillsboro	Traill	901	43	44.4	+2.2	78	21	17	2	1.95	+0.11	0.64	29	0	5	10	15	5	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	51	46.0	+4.3	80	21	17	14	1.14	-0.44	0.58	28-29	T.	4	17	6	7	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	3	44.6	.....	80	21	17	13†	1.14	.....	0.56	28-29	T.	6	9	12	9	n.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	4	43.6	.....	80	21	13	14	1.87	.....	0.72	28-29	0	4	17	10	3	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	47	42.6	+5.0	75	21	12	1	1.09	-0.06	0.39	26	T.	7	13	11	6	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	50	43.6	+3.4	77	21	14	2	2.19	+0.59	1.14	27	0	4	11	9	10	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	39	44.2	+2.1	80	23	18	19	1.06	-0.75	0.33	29	0	8	16	4	10	nw.	J. O. Halverson.
Mayville	Traill	975	47	45.4	+2.9	77	21	18	2	0.95	-0.62	0.80	29	0	2	20	3	7	n.	H. B. Addicot.
McHenry, 3 miles NE	Eddy	1,509	21	42.6	+2.0	78	21	15	2	2.18	+0.82	0.82	28-29	1.0	4	15	10	5	n.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	32	45.2	+1.6	79	23	20	1†	0.78	-1.15	0.30	22	0	4	25	5	0	se.	J. G. Carlson.
McVille	Nelson	1,467	13	.....	.....	.....	.....	.....	.....	1.70	.....	0.88	27	0	3	16	6	8	se.	A. M. Casad.
Milnor	Sargent	1,117	4	45.1	.....	80	21	16	2	1.07	-0.83	0.42	29	0	3	25	4	1	nw.	E. W. Wilson.
Oakes	Dickey	1,318	14	44.2	+1.4	77	23	20	2†	0.70	-1.34	0.29	26	0	5	17	3	10	nw.	F. H. Murray.
Park River	Walsh	998	39	41.9	+1.4	76	21	11	13	1.71	+0.43	0.62	27	0	6	23	5	2	nw.	E. J. Taintor.
Pembina	Pembina	789	69	42.0	+3.5	72	25	12	2	1.03	-0.17	0.47	26-27	0	5	5	18	7	nw.	S. W. Douglas.
Pembina Airport, 1 mile S.	Pembina	795	4	41.2	+2.7	72	21	14	2	0.96	-0.24	0.41	29	T.	6	5	11	14	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	13	.....	.....	.....	.....	.....	.....	2.03	+0.78	1.60	26-27	0	4	15	12	3	s.	T. M. Rykken.
Sharon	Steele	1,516	19	43.2	+3.6	76	21†	15	2	2.87	+1.47	1.33	26-27	1.0	6	9	16	5	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,245	37	46.9	+4.5	77	21†	18	19	1.48	-0.06	0.67	29	T.	4	23	5	2	nw.	I. C. Robertson.
Wahpeton	Richland	962	51	46.4	+2.2	75	21†	19	13	0.95	-0.98	0.34	29	0.6	5	12	13	5	se.	W. J. Cavanaugh.
Average for Eastern Division				44.0	+2.7	80	21†	11	18	1.46	-0.31	1.60	26-27	0.1	5	15	9	6	nw.	.....
Middle Division																				
Ashley, 1½ miles SE	McIntosh	2,014	47	43.6	+1.2	76	21†	15	14	0.31	-1.35	0.13	28-29	0	5	11	9	10	n.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peavey Elevator Co.
Bisbee	Towner	1,601	40	43.7	+3.0	83	21	11	2	1.55	+0.41	0.95	25-26	0	3	19	7	4	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	43.2	+5.1	80	21†	20	13	0.84	-0.29	0.38	29	T.	6	11	11	8	nw.	U. S. Weather Bureau.
Bismarck Airt. 2½ mi. SE	Burleigh	1,650	4	47.0	+7.7	81	23	21	13	0.87	-0.65	0.36	28-29	T.	7	11	11	8	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	51	45.8	+6.8	79	21†	15	1	1.38	+0.61	0.51	26	0	4	21	5	4	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	17	45.1	+3.8	78	23†	14	13	2.72	+1.46	1.60	26	T.	5	16	7	7	nw.	R. L. Williams.
Carrington	Foster	1,579	45	42.4	+2.8	79	8	17	13†	2.55	+1.30	1.18	29	0.2	7	15	5	10	nw.	Soo Line Agent.
Carson, 2½ miles SW	Grant	2,500	31	46.4	+3.9	82	21	15	14	0.89	-0.35	0.31	27	0	5	20	4	6	nw.	J. W. Everts.
Center	Oliver	2,100	5	45.6	.....	82	21	15	14†	1.58	.....	0.75	29	0	5	9	19	2	nw.	Fred L. Heinz.
Drake	McHenry	1,634	14	44.5	+4.1	79	21	17	13	2.46	+1.29	1.26	27	0	6	20	4	6	w.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	47	42.6	+3.1	74	21	11	1	1.23	+0.41	0.90	26	T.	6	12	14	4	s.	Geo. Gehres.
Eckman	Bottineau	1,500	38	43.8	+3.4	77	21	14	14	1.69	+0.83	1.59	26	0	3	12	15	3	se.	E. R. Sherman.
Fessenden	Wells	1,610	31	45.8	+5.4	80	21	18	13	2.27	+1.02	1.01	28-29	0	5	20	8	2	n.	John V. Zuber.
Fort Yates	Sioux	1,670	43	49.4	+4.6	81	21†	18	13	0.48	-0.80	0.48	29	0	1	24	3	3	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	22	45.0	+4.2	77	21	17	14	2.20	+0.92	1.71	26	T.	5	10	10	10	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	13	45.8	.....	78	21	17	13†	0.98	-0.56	0.49	28-29	0	5	6	21	3	n.	A. H. Haut.
Garrison	McLean	1,525	66	44.6	+2.5	80	23	19	14†	2.74	+1.65	1.64	26	0	6	13	15	2	nw.	E. L. Vorachek.
Granville	McHenry	1,504	36	45.2	+4.4	77	21	18	13†	2.18	+1.37	1.44	26	0	5	22	6	2	nw.	Fred Roble.
Hansboro	Towner	1,597	35	41.5	+2.9	75	21	14	1	0.81	-0.45	0.56	26	0	4	18	9	3	nw.	W. E. Disher.
Harvey	Wells	1,596	40	.....	.....	.....	.....	.....	.....	2.66	+1.42	1.55	26	0	4	6	20	4	nw.	Orville Hoksche.
Leeds	Benson	1,515	3	44.6	.....	78	21	17	1	1.45	.....	0.97	26	0	4	13	15	2	s.	John Dulmage.
Linton	Emmons	1,711	26	48.0	+5.2	82	21	18	14	0.54	-0.71	0.23	29	0	5	14	12	4	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	28	45.0	+4.4	79	21	15	14	1.78	+0.65	1.20	26	0	4	14	13	3	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	29	46.8	+4.2	81	21†	18	13	0.87	-0.30	0.41	29	0	5					

Climatological Data for April 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Alpha, 1 mile S.	Golden Valley	2,908	16	47.4	+6.0	79	23	16	14	0.84	-0.33	0.44	26	0.2	5	12	6	12	nw.	H. A. Bury.
Amidon	Slope	2,759	37	47.4	+6.0	79	23	16	14	1.20	0.00	0.94	26	0	5	19	8	3	nw.	Stanley W. Baie.
Beach	Golden Valley	1,958	14	43.0	+4.7	77	21	18	14	1.31	+0.14	0.85	27	T	3	18	6	6	w.	Mrs. H. Russell.
Bowbells	Burke	2,572	28	45.6	+3.1	79	23	17	14	0.67	-0.45	0.28	26-27	0	5	18	3	9	nw.	Charles Kaufman.
Bowman	Bowman	1,954	34	44.0	+4.1	75	21	20	14	0.99	+0.01	0.63	27	0	3	8	12	10	nw.	Oscar L. Erickson.
Crosby	Divide	2,543	50	45.1	+3.3	80	23	14	14	1.45	+0.37	0.62	27	T	7	17	2	11	nw.	J. H. Phelps.
Dickinson, 1 mile NW	Stark	2,577	3	46.2	.....	79	23	18	14	1.06	.....	0.49	26	T	6	10	11	9	nw.	Leroy Moomaw.
Dickinson Airt., 5 1/2 mi. S.	Stark	2,191	43	44.2	+2.7	80	23	16	18	2.08	+0.82	0.80	27	T	7	14	10	6	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,082	49	46.7	+3.7	83	21	18	18	1.98	+0.97	1.28	25-26	0	4	18	10	2	nw.	O. T. Evenson.
Elbowoods	McLean	2,224	32	46.0	+4.3	78	23	15	14	1.59	+0.56	1.29	26	0	4	9	19	2	nw.	H. W. Case.
Epping	Williams	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	se.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,790	24	46.4	.....	78	23	20	14	1.42	+0.58	0.79	29	0	6	18	8	4	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,781	3	45.8	.....	82	23	14	14	1.60	+0.25	0.56	26	T	6	13	13	4	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	1.25	25-26	0.9	5	7	12	11	w.	U. S. Airway Comm. Sta.
Grassy Butte, 8 miles NNW.	McKenzie	.....	14	.....	.....	.....	.....	.....	.....	1.78	+0.71	0.91	26	0	5	18	7	5	se.	Fred Hartman.
Halliday	Dunn	2,073	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Gerhart.
Hettinger	Adams	2,755	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. A. Springer.
Kenmare	Ward	1,799	11	44.4	.....	77	21	20	14	1.71	+0.76	1.50	26	0	3	21	3	6	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	33	48.6	+5.4	81	24	14	14	0.77	-0.25	0.40	26	1.2	4	16	7	7	nw.	S. P. Grane.
Medora	Billings	2,271	27	.....	.....	.....	.....	.....	.....	1.21	+0.18	0.58	26	0	4	18	7	5	nw.	Ovide E. Grenier.
Mott	Hettinger	2,424	35	50.1	+7.8	83	21	17	14	0.50	-0.71	0.12	27	0	6	22	6	2	se.	P. G. Wick.
New England	Hettinger	2,400	48	47.5	+5.1	81	21	16	14	1.05	+0.04	0.32	27	0.9	7	13	8	9	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	.....	2	45.2	.....	81	21	15	18	2.20	0.00	0.95	26	0	5	19	6	5	nw.	Peter F. Pieck.
Parshall	Mountrail	1,929	27	42.4	.....	78	23	13	14	1.65	+0.70	0.90	27	T	7	13	16	1	nw.	C. E. Shubert.
Porta	Burke	1,954	37	43.0	+2.4	77	21	18	14	0.85	-0.12	0.52	27	0	3	25	2	3	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	37	42.3	+2.3	73	21	24	1	1.48	+0.27	0.92	26	0	3	11	14	5	se.	Geo. B. Gee.
Richardton, 1 1/2 miles N.	Stark	2,467	26	47.2	+5.8	78	23	20	14	1.11	-0.03	0.53	28-29	T	6	13	14	3	nw.	Assumption Abbey.
Sanish	Mountrail	1,835	17	43.8	+2.1	79	23	15	14	1.95	+0.85	1.07	27	0	5	17	10	3	.....	H. J. Bugge.
Stanley	Mountrail	2,258	5	42.6	.....	76	21	17	20	1.76	.....	1.34	25-26	0	3	9	16	5	w.	Leroy Edwards.
Tioga	Williams	2,279	14	.....	.....	.....	.....	.....	.....	1.48	+0.52	1.06	25-26	0	3	14	10	6	se.	B. V. Olson.
Trotters	Golden Valley	.....	17	.....	.....	.....	.....	.....	.....	1.68	+0.65	0.65	26	0.5	8	3	21	6	se.	Walter Grunewald
Van Hook	Mountrail	1,864	3	46.4	.....	83	21	21	13	1.49	.....	0.90	26	T	4	19	9	2	se.	V. L. Snyder.
Watford City	McKenzie	2,084	29	48.4	+7.0	80	21	21	18	1.86	-0.70	1.08	26	0.5	5	14	15	1	nw.	J. C. Zeller.
Wildrose	Williams	2,258	15	.....	.....	.....	.....	.....	.....	1.16	+0.31	0.83	26	0	2	27	1	2	nc.	Fred E. Maucher.
Williston	Williams	1,878	63	47.3	+5.3	79	23	20	14	1.15	-0.05	0.78	25-26	T	8	10	17	3	se.	U. S. Weather Bureau.
Average for Western Division				45.5	+4.0	83	21	18	14	1.42	+0.18	1.50	26	0.1	6	15	10	5	nw.	.....
Average for the State				44.9	+3.3	83	21	11	1	1.48	+0.03	1.75	25-26	0.1	5	15	10	5	nw.	.....

Daily Temperatures for April 1943

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley ³	Maximum..	41	44	73	54	46	67	67	71	66	59	57	44	35	46	70	52	63	48	55	64	76	64	76	67	60	61	55	62	52	50	.....	58.2
	Minimum..	25	22	32	27	22	38	27	38	38	31	40	22	16	15	26	27	28	20	18	28	41	40	33	42	28	38	29	31	29	22	.....	29.1
Bismarck Airport ¹	Maximum..	40	50	72	55	50	72	70	75	69	65	59	48	40	51	70	51	64	51	61	72	80	66	81	66	62	55	59	65	47	52	.....	60.6
	Minimum..	29	28	42	33	26	39	31	44	40	36	42	24	21	22	31	29	25	24	26	37	42	44	35	44	34	36	35	40	33	28	.....	33.3
Bottineau ⁵	Maximum..	42	48	67	63	60	60	67	66	60	62	58	53	46	48	61	65	60	55	66	75	79	79	78	78	61	50	65	73	66	58	.....	62.3
	Minimum..	15	19	22	30	22	32	26	37	41	33	35	27	17	18	30	22	30	20	25	32	42	37	29	44	28	39	37	30	34	23	.....	29.2
Carson	Maximum..	50	56	74	55	54	71	73	76	69	57	59	50	42	54	71	55	72	55	50	72	82	65	81	66	63	56	58	49	46	56	.....	61.6
	Minimum..	30	28	38	31	31	38	29	42	40	33	35	30	19	15	31	28	28	16	23	37	40	37	30	37	27	38	31	34	35	24	.....	31.2
Crosby	Maximum..	40	57	60	49	55	61	71	65	63	71	55	55	39	55	58	43	50	55	64	73	75	66	75	63	64	45	53	63	44	53	.....	58.0
	Minimum..	24	25	31	30	28	29	31	35	33	35	35	25	20	21	34	24	24	23	25	34	36	39	31	33	27	35	34	31	32	26	.....	29.9
Devils Lake ¹	Maximum..	31	37	66	49	47	61	66	69	60	60	56	42	35	43	62	50	47	47	57	66	77	66	74	64	60	49	55	62	49	51	.....	55.3
	Minimum..	17	17	34	28	23	36	31	38	39	32	38	22	20	22	29	29	28	22	25	32	41	44	36	42	33	37	36	33	32	28	.....	30.8
Dickinson Airport ³	Maximum..	51	64	71	53	54	68	71	77	68	58	58	52	40	55	68	52	62	52	64	72	77	61	79	64	62	48	53	64	43	52	.....	60.4
	Minimum..	28	31	41	30	31	29	33	40	43	35	37	28	22	18	36	30	28	22	28	35	46	34	34	36	28	32	34	35	29	26	.....	32.0
Dunn Center	Maximum..	48	62	70	54	56	69	72	76	69	65	59	45	43	55	67	50	60	56	65	74	79	68	80	63	64	44	57	65	43	53	.....	60.7
	Minimum..	29	28	30	30	25	26	28	28	34	31	33	31	25	18	28	21	16	20	28	34	34	28	36	25	29	34	31	30	25	.....	27.8	
Fargo Airport ¹	Maximum..	32	34	60	53	45	53	65	65	68	58	59	37	34	41	65	49	52	49	55	63	78	68	77	71	61	48	56	63	49	51	.....	55.6
	Minimum..	22	19	34	31	26	39	37	38	37	38	37	22	20	23	29	32	30	27	21	30	42	43	35	49	36	42	37	33	34	30	.....	32.1
Fessenden	Maximum..	45	42	68	63	49	67	68	76	64	66	60	52	36	47	66	52	55	50	60	69	80	71	78	77	64	55	55	64	57	53	.....	60.3
	Minimum..	21	20	31	34	25	34	30	42	35	31	40	33	18	29	29	26	24	19	23	31	38	44	35	52	30	39	32	37	26	.....	31.4	
Fullerton	Maximum..	52	42	67	67	48	65	67	72	67	60	58	50	36	45	69	52	63	50	55	65	78	65	77	68	60	54	56	66	57	51	.....	59.4
	Minimum..	25	21	33	36	25	38	34	35	37	33	43	34	20	20	25	29	27	25	25	41	46	35	47	32	44	36	41	38	27	.....	32.6	
Garrison ³	Maximum..	38	51	71	52	52	70	72	74	67	64	57	45	39	52	67	49	56	51	61	71	79	65	80	63	63	44	55	62	44	51	.....	58.8
	Minimum..	25	25	38	31	24	32	29	37	39	34	38	22	20	19	30	27	23	20	19	37	40	40	33	42	38	35	34	32	32	25	.....	30.3
Golva ³	Maximum..	59	74	70	54	64	68	75	76	74	62	60	52	40	59	67	53	64	57	70	73	77	61	82	63	68	50	57	62	46	54	.....	62.9
	Minimum..	25	29	41	26	31	29	27	36	44	33	35	27	17	14	35	25	21	19	28	32	33	29	28	29	25	32	31	29	27	23	.....	28.7
Grafton	Maximum..	36	32	55	55	41	58	65	66	63	57	58	53	34	41	54	54	50	51	57	65	73	73	72	63	61	58	60	69	54	.....	56.4	
	Minimum..	17	15	31	36	20	34	33	38	34	34	38	27	19	23	27	29	36	26	24	27	37	47	35	46	39	42	39	30	38	30	.....	31.7
Grand Forks Airport ³	Maximum..	27	33	52	49	42	51	62	65	61	56	57	34	34	40	53	50	48	49	55	63	76	69	75	69	62	50	57	60	60	53	.....	53.4
	Minimum..	20	16	32	28	23	35	29	35	36	30	33	22	19	23	25	29	29	26	22	26	36	38	34	44	34	37	37	30	32	28	.....	29.6
Jamestown Airport ³	Maximum..	42	40	72	55	48	65	69	76	66	58	60	47	38	47	68	56	59	52	56	66	80	68	77	67	62	49	58	62	47	.....	58.8	
	Minimum..	21	19	34	26	23	35	31	39	38	31	41	20	17	17	26	28	27	22	21	28	41	46	36	46	34	40	32	31	32	27	.....	30.3
Kenmare ⁵	Maximum..	39	50	65	50	53	65	68	70	64	66	56	44	41	53	61	46	52	53	63	73	77	65	76	60	63	43	54	60	47	53	.....	57.7
	Minimum..	22	24	28	31	24	27	33	31	32	30	34	36	24	20	26	28	23	21	32	38	43	40	38	50	29	39	35	33	34	28	.....	31.1
Langdon	Maximum..	37	32	64	55	48	59	65	64	58	59	59	61	39	44	57	55	45	52	57	65	75	74	73	66	62	55	58	61	57	58	.....	57.1
	Minimum..	12	13	28	32	18	32	29	35	33	29	36	21	15	18	29	25	31	19	25	35	40	44	30	34	32	38	36	27	33	21	.....	28.2
Marmarth	Maximum..	62	76	75	57	62	70	75	75	69	60	60	58	42	63	60	58	62	59	77	60	64	80	81	61	59	59	53	51	56	.....	64.1	
	Minimum..	31	30	40	30	36	30	28	35	36	39	39	40	29	14	27	36	25	24	40	40	36	28	43	28	33	33	40	35	24	.....	33.0	
Minot Airport ³	Maximum..	37	47	68	50	52	65	70	69	63	66	55	41	38	50	62	48	50	51	62	72	77	66	76	61	62	45	53	62	46	51	.....	57.2
	Minimum..	24	24	39	30	23	28	32	37	32	31	35	24	22	19	33	27	21	20	24	37	44	40	38	41	31	35	38	32	32	26	.....	30.6
Mott	Maximum..	60	68	80	65	58	80	77	80	82	74	65	67	60	58	73	58	68	57	71	75	83	75	82	81	71	70	63	62	51	55	.....	69.0
	Minimum..	31	32	42	30	29	32	24	30	46	35	36	30	27	17	28	29	28	20	28	35	34	33	28	35	28	35	34	33	37	26	.....	31.2
Pembina Airport ³	Maximum..	21	32	51	47	43	55	62	63	57	56	54	32	32	38	53	47	42	48	55	64	72	68	70	67	61	47	53	62	47	56	.....	51.8
	Minimum..	15	14	32	27	22	36	34	36	35	31	32	21	19	22	27	28	34	25	26	30	41	44	40	41	38	40	35	31	31	27	.....	30.5
Sharon	Maximum..	36	32	65	51	47	58	66	74	62	56	58	45	35	41	60	52	54	49	55	61	76	67	76	67	62	48	56	59	51	52	.....	55.8
	Minimum..	17	15	30	34	21	34	30	39	38	29	38	25	18	19	26	28	28	24	25	33	37	45	82	52	35	39	32	31	37	27	.....	30.6
Steele	Maximum..	55	46	71	63	50	65	67	76	69	63	58	50	35	47	67	52	60	46	57	66	77	70	79	67	60	53	57	64	52	50	.....	59.7
	Minimum..	24	23	36	32	21	36	28	40	39	31	40	33	16	18	21	27	28	21	21	82	39	42	28	47	33	40	33	31	33	23	.....	30.5
Valley City	Maximum..	53	40	69	67	55	63	67	76	72	67	65	57	40	43	67	63	59	50	56	66	77	76	77	69	63	58	58	63	63	52	.....	61.7
	Minimum..	22	20	32	37	20	33	33	38	38	31	40	36	21	21	26	31	28	25	18	25	40	47	36	50	35	43	35	32	41	28	.....	39.1
Wahpeton	Maximum..	54	34	60																													

Daily Precipitation for April 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Casseltown	Red.																						16				20	32		70		1.38			
Cooperstown 2	Sheyenne			T.			T.					T.											20				36	98		80		2.34			
Courtenay	James																							25			35	27		90		1.77			
Devils Lake 1 1	Devils Lake		T.				T.					T.		T.		.01							T.				.03	.08		36		1.45			
Edgeley	James	T.						T.					.13														.31	.13		33		1.24			
Edmore	Devils Lake															.07												.93	.15		55		1.70		
Ellendale	James												.13	T.													.23	.18		.09	.11	1.06			
Fargo 1 1	Red.	.17			T.		T.					T.	T.	T.											T.		.18	.20	.19	.01	.47		1.05		
Forman	Sheyenne																											.14	.14				0.80		
Fullerton	James	T.											.11	T.													.37	.20					0.88		
Grafton	Red.															T.											.24	.24	.04	.22	.03		1.71		
Grand Fork Airport 3 1	do	T.		T.	T.		T.						.11	T.		T.											.21	.82	.10		.48		0.78		
Hankinson 2	do											T.	T.			T.											.15	.27		.38			1.85		
Hannah	Pembina						T.							T.														.27	T.	.19	T.		0.75		
Hillsboro	Red.											.01		T.														.40	.20		.25		0.85		
Jamesstown Airport 3	James	T.	T.		T.		T.					T.	.04	T.		.01							T.				.26	.41	.63		.64		1.95		
Langdon	Pembina													T.			.09											.15	.25	.14	.15	.41	1.14		
Larimore	Red.							.02						T.														.01	.39	.26		.31		1.09	
Lisbon	Sheyenne	.05						T.									T.											.29	.38	.14		.38		2.19	
Mayville	Red.													.31														.02	.31	.02	.33	.01	1.06		
McHenry	James											T.		T.														.15			.80		0.95		
McLeod	Sheyenne																											.60	.65		.82		2.18		
Oakes	James												.07															.20	.02	.26			0.78		
Park River	Red.						.12										.03											T.	.29	.02	.08		0.70		
Pembina Airport	do	T.		T.			.02					T.	T.	T.			.08						T.				.08	.33	.62		.53		1.71		
Petersburg	do																											.09	.27	.09	T.	.41	0.96		
Sharon	do				.01		T.					T.	T.															.08	.71	.89		.35		2.03	
Valley City	Sheyenne	T.												T.														.26	.41	1.33	.01	.85		2.87	
Wahpeton	Red.	.03										T.		T.														.24	.29	.28	.67		1.48		
																												.33	.05	.20	T.	.34		0.95	
Middle Division																																			
Ashley 3	Missouri	T.											.06										T.	.10				T.	.02	.08	.05		0.31		
Bisbee	Devils Lake															T.							.05					.95		.55			1.55		
Bismarck 1	Missouri	T.	T.	T.	T.								.01										.04	.10		T.		.24	.07	.30	.11		0.87		
Bottineau 2	Mouse																											.30	.48	.51		.09	1.38		
Butte	do												.26															.02	1.10	.50		.84		2.72	
Carrington	James												.08															.08	.35	.76	.10	.97	.21	2.55	
Carson	Heart																											.15	.24	.31	.10	.09		0.89	
Center	Missouri													T.														.06	.40	.35	.02	.75		1.58	
Drake 2	Mouse												.17															.08	.39	1.26	.48	.08	T.	2.46	
Dunseith	do		T.										.01				.09											.06	.90	.10		.07		1.23	
Eckman	do																												.39	1.26	.48			1.69	
Fessenden	James												.05										.04						.90	.10		.10		2.27	
Fort Yates	Missouri																													T	T	.48	0.48		
Foxholm	Mouse												.12															.09				.28		2.20	
Gackle	James						T.						.11															.05			.24		.49	0.98	
Garrison 3	Missouri										T.																		.09	.02	1.64	.07	.15	.77	2.74
Granville	Mouse												.20																.10	.19	.25		.44		2.18
Hansboro	Devils Lake						T.										T.												.03		.56	.06		.16	0.81
Linton	Missouri												T.																.02	.13	.01	.15	.23		0.54
Maddock	Sheyenne																.70	.50											.06	.70	.50		.52		1.78
Maudan 2	Missouri															T.													.02	.13	.01	.15	.23		0.54
Max 2	do											.01					.07												.07	.21	.14	.04	.41	T.	0.87
McClusky	do																												.07	.58	1.63	.07	.65		3.01
Minot Airport 3	Mouse											.01	.12										.13	T.		.01	T.		.82	.16		1.49		2.47	
Mohall	do												.09																.12	.16	.07		.22		1.66
Napoleon 2	Missouri												.15																.16		.07		.22		1.66
New Salem	Heart												.04																	.24	.03	.05	.34		0.97
Pettibone	James												.12																.20	.51	.21	.05	.47		1.28
Rolla	Devils Lake						T.																						.05	.81		.65		1.78	
Rugby	Mouse		T.										.04				.12												.05	.83	.05		.21		1.26
Ryder	Missouri															T.													.08	.68	.49		.32		1.61
Selfridge	do	.05											.08																.15				.50		2.52
Steele	do												.13																.03		.03	.02	.20		0.41
Tagus	Mouse																												.16	.28	.22	.47		1.26	
Towner	do												.05																.02				.50		1.97
Turtle Lake	Missouri											T.																	.05	.90	.23		1.09		2.27
Tuttle	do												.22																	.32	.27	T.	.58		1.49
Underwood	do												T.																	.43	.12		.90		1.45
Velva	Mouse												.23																	.43	.12		.90		1.45
Washburn	Missouri																												.08	1.28	.32		.53		2.44
Westhope	Mouse																													.43	.36		.89		1.68
Willow City	do												T.				.04																		

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ²Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³Data for 24 hours ending 12:30 a. m. C.S.T. ⁴Precipitation measured with recording gage. ⁵Precipitation included in the next following measurement. T, Trace, or precipitation less than 0.01 inch. [WBO, Minneapolis, 6-1-43-1150]

FLOODS IN NORTH DAKOTA*[Continued from page 13]*

previous snow melting coated the ground with ice causing more run-off than usual.

The Cannonball, Heart, Knife, and Little Missouri rivers, as well as the smaller streams in western North Dakota, were running bankful by March 23d. By the 24th, the Cannonball and Heart rivers were flooding large areas over the western reaches. Severe flooding occurred in the Heart River basin, from Glen Ullin west, beginning March 24th. Old timers west of Mandan reported the Heart River higher than they had ever seen it, and much farm land was inundated. On the 26th, the water began running into the city of Mandan and serious flooding occurred. The stage was 1.3 feet higher than in any previous recorded flood. Three-fourths of the city of Mandan was under water. Boats were used on the main streets on the 26th to 28th, and in some of the lower parts of the city the water was nearly 10 feet deep. Natural gas for heating and cooking was turned off for 4 days leaving much of the city without heat.

The water in the Heart River and in Mandan began to recede on Sunday, March 28th, and by the 30th much of it had run out and pumps were installed to pump the water out of basements. Much damage, running into hundreds of thousands of dollars, occurred in Mandan, mostly to stored grain, personal and business property, and to highways and railroads. It was the worst flood in the history of the city. The Mandan radio station was off the air for several days because the transmitters were flooded, and the KFJR transmitters were threatened when Apple Creek was flooding the land around their station. A few schools were closed for more than a week because it was impossible to get coal from the mines.

U. S. Highway No. 10 was closed for nearly two weeks, and the main-line Northern Pacific trains could not run west for 2 days. Trains from Mandan to Killdeer did not operate from March 24th until March 29th, when a coal train was brought in from Beulah. It was another two weeks before complete service was restored to Killdeer. On the south branch line from Mandan to Mott service was disrupted on March 24th, and the damage was so great that trains did not run on this line until May

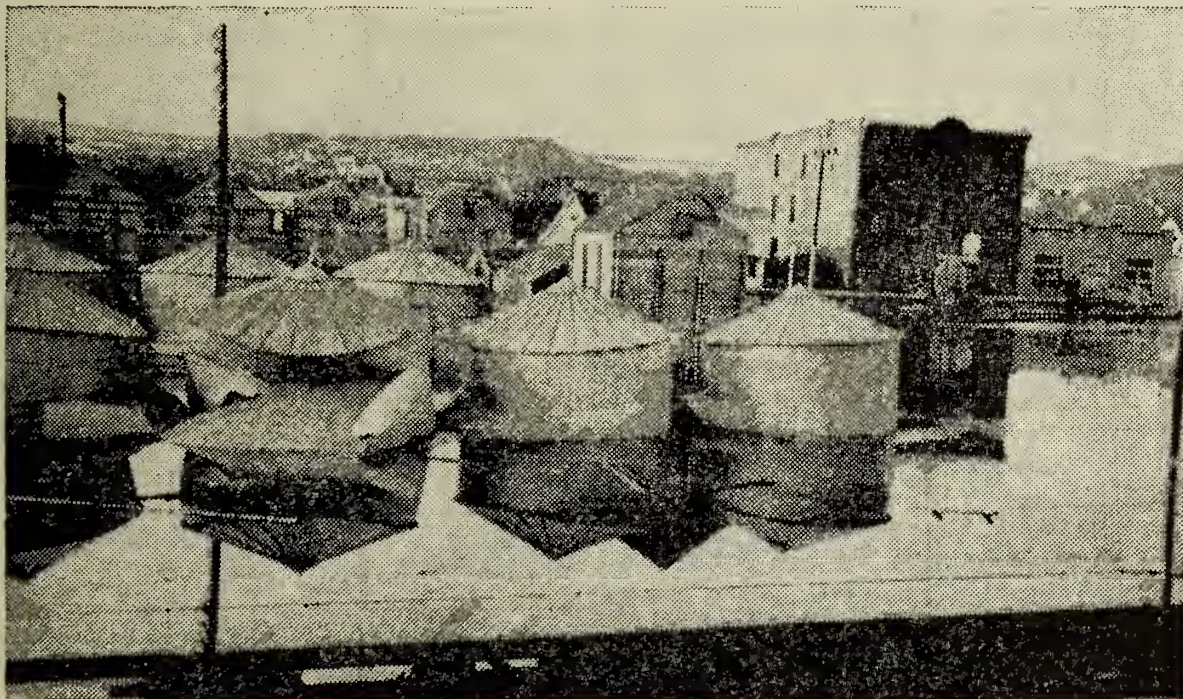
5th, with crews working from both ends of the line repairing bridges and roadbeds.

The Cannonball, Knife, and Little Missouri rivers also began dropping slowly on the 28th. The greatest damage on these streams occurred on the Cannonball due to the flooding of the city of Mott, where about 500 families had to be evacuated. About 500 people in Beulah, on the Knife River, also had to leave their homes due to flooding. Damage along the Little Missouri River was confined mostly to livestock and feed.

The Missouri River was near flood stage from Williston to below Elbowoods beginning March 27th, and considerable flooding occurred from the 29th to the 31st in the Williston to Washburn area. The losses along the Missouri River during March were slight, but Highway No. 8, between Elbowoods and the Highway Bridge was under water for about 8 days.

Ample warnings were issued and there was no loss of life when the flood waters came, but, one man was drowned in McKenzie County while trying to rescue some of his goats when a creek running into the Yellowstone overflowed. Three men were drowned at Hazen, on the Knife River, while trying to rescue a horse, and a man was drowned at Mandan, on the Heart River, when he went back to his home to get some clothing and his boat capsized.

Floods also occurred from Sanish to Washburn on April 1st and 2d, and floods occurred between Bismarck and Washburn from April 1st to 4th inclusive. During this period the river at Bismarck averaged 3 feet above flood stage, and houses and hay stacks were under water. More water flowed past Bismarck during this period than in any previous flood on record. On April 3d, the U. S. G. S. measured a flow of 284,000 second feet with the river flowing about 7 miles per hour. The highest stage at Bismarck was 23.2 feet on April 1st, or 4.2 feet above flood stage, and the water was above flood stage from March 31st to April 4th. Many hay stacks were ruined and some houses were damaged along the Missouri River with the greatest damage between Bismarck and Sanger, 25 miles north of Bismarck. Livestock in the bottom lands was moved to higher ground.

[Continued on next page.]

Heaviest damage in the Mandan flood was probably done to the grain stored in steel, wood, and composition graineries by the Commodity Credit Corporation. Unofficial reports say that the 250,000 bushels stored in Mandan might be almost all spoiled. Pictured above is one of the steel bins burst by the expansion of the wet wheat. Every bin shown in this picture had burst.

—Courtesy Bismarck Capitol

FLOODS IN NORTH DAKOTA

[Continued from preceding page.]

The James, Sheyenne, Maple, and Rush rivers, and the smaller streams in central North Dakota also flooded heavily, with damage mostly to crop lands, highways, and bridges. However, considerable flooding occurred in Jamestown, on the James River, and at West Fargo, on the Sheyenne River. At Amenla, in Cass County, much of the town was under water. Almost the entire valley in Griggs County, on the Sheyenne River, was under water, and Highway No. 45 northeast of Cooperstown was closed.

The flooding during March and April was not confined to the rivers, for many creeks, lakes, and sloughs were flooding in all sections of the state. Long Lake, in southeastern Burleigh County, was out of its banks, and the main highways east and southeast of Bismarck were closed because they were under water. U. S. Highway No. 10, east of Bismarck, was closed for more than a week because there was no way to drain this excess water from the lake.

Many smaller streams in southeastern North Dakota were flooding and washing out bridges during the first few days of April, and on April 1st steadily rising waters of the Red River, fed by swollen tributaries of five other streams, exceeded flood stage and began inundating park drives in Fargo. Thousands of acres of farm lands were under water north and south of Fargo, between Richland and Grand Forks Counties. Considerable damage occurred at Wahpeton, where the Red River was above flood stage from March 31st to April 8th. The crest on April 2d was 10.7 feet, or 4.7 feet above flood stage. By April 6th, many

families in Fargo were forced to vacate their homes. St. John's Hospital in Fargo was forced to move out patients due to water in the boiler room and other parts of the hospital. Ample warnings were given so that medical and surgical supplies were moved from the basement before flooding. Much of the lower section of Fargo was flooded, and business houses had water in their basements and some had water in their storerooms. Over 200 houses in the Fargo area were flooded. April 7th, the waters began to recede; and, while much farm land was flooded, losses were not so great as in the city. The highest stage at Fargo was 34.3 feet on April 7th, and the river was above flood stage from March 31st to April 18th. Much farm land in Traill, Grand Forks, Walsh, and Pembina counties was also flooded. Seventy-five thousand or more acres in the Red River Valley will not be seeded this year because it is too wet for farmers to work the land.

At Grand Forks, the crest of the flood was reached on April 11th, with a stage of 33.3 feet. This is 8.3 feet above flood stage, but 13.0 feet lower than the crest of the 1897 flood. More than 60 families had to be evacuated. The river was above flood stage from April 4th to April 20th.

In the extreme northern part of the state floods were reported as late as April 20th. In Renville County and the surrounding counties on the tributaries of the Mouse River, much farm land was under water from April 10th to April 20th.

About 600 families in 9 western and 2 eastern counties received aid from the Red Cross. Damage amounted to more than two million dollars in these floods. Detailed money losses will be published in the Monthly Weather Review.



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Nat Hist

UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LII BISMARCK, N. D., MAY 1943 No. 5

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

The month was cool with precipitation averaging near normal. It was the coolest May since 1935. Temperatures were unusually low from the 7th to the 14th and some frost damage occurred to early crops and shrubs. The precipitation was above normal in the eastern half of the state and below normal in the western half. It was fairly well distributed throughout the month, but the greatest amount occurred after the 22d. No severe storms were reported. Farm work made rapid progress due to the favorable weather conditions, but much of the lowlands could not be planted due to the April floods. The cool weather retarded the growth of grass, and pastures and ranges were backward.

TEMPERATURE

The mean temperature for the state was 49.9°, or 3.6° below the 1892-1943 average for May. The mean temperature for the eastern division was 50.4°; for the middle division, 50.0°; and for the western division, 49.4°. The highest mean temperature was 53.8° at Mott, and the lowest, 46.4° at Hannah, making a range in mean temperature of 7.4°. The absolute range was 81°, from 96° at Fort Yates and Mott on the 28th, to 15° at Dunseith on the 7th. The average daily deficiency in temperature for the state since January 1, 1943, is 1.9°.

PRECIPITATION

The average precipitation for the state was 2.21 inches, or 0.11 inch less than the 1892-1943 average for May. In the eastern division the average amount was 2.72 inches; in the middle division, 2.25 inches; and in the western division, 1.66 inches. The greatest monthly amount reported was 5.17 inches at Milnor; the least was 0.64 inch at New Hradec. The greatest amount recorded in any 24 consecutive hours was 3.01 inches at Fort Yates on the 30th. The accumulated excess in precipitation for the state since January 1, 1943, is 0.65 inch. The average snowfall was 1.0 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.39	8	29.23	31	12.8	38	w.	23	70	78	50	46	54	426
Devils Lake....	30.38	8	29.31	31	10.2	34	n.w.	2	74	82	57	51	45	497
Fargo	30.34	8	29.28	31	14.9	42	w.	2	74	80	58	56	51	427
Williston.....	30.35	8	29.34	31	8.6	32	w.	1	70	77	47	45	63	439

† And other dates.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lunar halos....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hail	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thunderstorms	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

ERRATA

MARCH 1943—

- p. 10: Graffon, total snowfall should be 17.6 inches.
Jamestown, total precipitation should be 1.70 inches.
Maddock, minimum temperature and date should be -20 on the 7th.
Rolla, mean temperature should be 14.2°.
Steele, total snowfall should be 11.5 inches.

COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	46.6	96	13	3.43	1.84	1.33	2.20	3.9	12	6	8	17	
1893...	52.2	97	19	1.29	1.14	2.40	1.61	0.2	6	11	8	12	
1894...	54.6	98	23	1.40	1.24	1.88	1.51	0.0	5	16	9	6	
1895...	54.4	101	15	2.60	2.88	2.57	2.48	0.0	8	10	11	10	
1896...	56.9	103	22	5.44	3.70	5.81	4.95	0.0	13	6	14	11	
1897...	55.4	97	16	0.85	0.61	0.60	0.67	T.	4	16	10	5	
1898...	52.7	92	14	1.95	1.84	2.15	1.98	0.0	5	15	9	7	
1899...	50.6	91	16	3.40	4.80	2.27	3.49	0.4	8	9	9	13	
1900...	59.2	106	15	0.78	0.70	0.50	0.69	0.0	3	18	8	5	
1901...	60.0	99	19	0.35	0.24	0.33	0.31	T.	2	21	4	6	
1902...	55.9	94	24	4.31	3.33	3.06	3.57	0.4	10	13	6	12	
1903...	54.3	96	11	2.52	3.35	3.50	3.12	T.	4	14	8	9	
1904...	54.2	93	20	2.05	1.64	1.10	1.60	T.	6	14	9	8	
1905...	50.1	88	10	4.24	2.78	1.72	2.91	4.0	8	12	8	11	
1906...	50.8	99	11	4.41	4.74	5.59	4.91	0.4	12	9	8	14	
1907...	44.0	84	6	1.52	1.02	1.39	1.31	3.1	6	12	10	9	
1908...	50.8	88	9	3.54	2.58	2.57	2.90	0.9	8	13	7	11	
1909...	51.0	98	5	4.78	3.92	4.68	4.46	0.1	10	12	9	10	
1910...	50.7	94	10	0.86	0.95	1.28	1.03	0.1	6	12	11	8	
1911...	55.0	99	6	4.06	2.25	2.39	2.90	T.	8	14	9	8	
1912...	54.2	90	16	4.17	4.59	4.42	4.39	0.7	11	10	10	11	
1913...	51.2	100	11	1.75	1.63	1.74	1.71	0.2	9	10	10	11	
1914...	55.2	95	16	1.83	2.56	1.98	2.12	1.0	8	16	8	7	
1915...	51.1	98	15	3.37	3.21	2.81	3.13	0.4	9	10	10	11	
1916...	51.0	95	7	2.95	1.70	1.64	2.10	0.3	8	11	11	9	
1917...	51.2	98	15	0.21	0.29	0.53	0.34	0.1	2	20	7	4	
1918...	51.7	99	6	2.58	2.40	1.83	2.27	0.5	9	10	11	10	
1919...	55.5	101	16	4.29	3.14	1.91	3.11	0.4	9	16	8	7	
1920...	53.9	89	20	2.40	1.34	1.54	1.76	0.1	7	13	10	8	
1921...	53.8	90	21	2.75	2.22	2.36	2.44	T.	9	13	10	8	
1922...	56.3	93	24	4.29	2.81	3.08	3.39	0.1	12	10	11	10	
1923...	54.1	100	13	2.56	1.57	1.17	1.77	0.2	6	15	10	6	
1924...	46.9	84	15	1.05	0.57	0.81	0.81	0.0	5	12	10	9	
1925...	53.6	111	10	1.94	1.17	1.22	1.44	T.	4	17	9	5	
1926...	58.5	105	10	2.07	2.09	2.45	2.20	0.0	7	13	11	7	
1927...	48.0	87	13	5.21	6.06	5.77	5.68	3.2	14	6	8	17	
1928...	58.2	107	16	1.02	1.23	1.00	1.08	0.0	5	18	7	6	
1929...	49.1	92	8	2.00	2.69	4.28	2.99	0.4	7	16	9	6	
1930...	50.8	98	18	3.76	2.40	1.69	2.62	0.7	9	12	8	11	
1931...	53.1	100	10	2.17	1.09	0.98	1.41	0.3	6	16	7	8	
1932...	55.9	98	25	2.66	2.02	1.76	2.15	2.2	6	13	9	9	
1933...	54.8	98	19	2.78	3.18	3.50	3.15	T.	9	9	10	12	
1934...	63.6	111	18	0.46	0.32	0.29	0.36	0.0	3	17	10	4	
1935...	49.5	89	20	2.11	2.93	2.79	2.61	1.5	12	6	11	14	
1936...	61.0	100	20	1.05	0.66	0.70	0.80	T.	4	19	9	3	
1937...	56.9	99	19	2.35	1.67	1.27	1.76	T.	7	12	11	8	
1938...	52.0	88	18	2.93	2.07	2.66	2.55	0.2	11	8	12	11	
1939...	60.1	104	18	1.33	1.60	1.71	1.55	0	8	13	11	7	
1940...	54.9	96	17	1.60	2.26	2.06	1.97	0.1	8	14	11	6	
1941...	58.3	98	21	2.23	3.12	3.48	2.94	T.	12	10	10	11	
1942...	50.0	87	19	3.87	2.94	2.27	3.03	0.5	11	9	9	13	
1943...	49.9	96	15	2.72	2.25	1.66	2.21	1.0	9	8	10	13	
Period	53.5	111	5	2.53	2.22	2.20	2.32	0.5	8	13	9	9	

NAT.
HIST.

Climatological Data for May 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	961	47	52.8	-1.9	83	21	27	7†	3.11	+0.24	0.90	15	T.	9	16	6	9	s.	C. Hayford.
Cavalier	Pembina	894	33	50.4	.....	84	21†	24	7	3.01	+0.61	1.07	30-31	T.	13	13	2	16	n.	City Light & Power Co.
Colgate	Steele	1,180	10	.....	.....	.....	.....	.....	.....	2.28	.....	0.60	31	T.	14	10	8	13	n.	M. H. Badger.
Cooperstown	Griggs	1,428	46	51.8	-2.0	83	21†	24	12	2.83	+0.23	0.72	23	T.	10	6	8	17	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	13	.....	.....	.....	.....	.....	.....	2.06	-0.01	0.94	23	T.	8	9	8	14	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	49.0	-3.6	84	22	23	7	2.21	+0.18	0.79	22-23	0.2	12	3	6	22	sw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	42	51.2	-3.2	91	28	19	12	1.73	-0.90	0.78	23	T.	9	6	14	11	nw.	N. S. Weather Bureau.
Edmore, 1½ miles W.	Ramsey	1,524	19	48.6	-4.6	84	22	21	7	2.12	+0.20	0.70	31	0	7	13	7	11	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	51.0	-4.3	93	28	21	12	1.98	-0.79	0.76	11	7.8	10	8	8	15	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	16	51.3	-3.8	81	28	28	7	3.65	+0.76	1.25	23	T.	10	7	8	16	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	50	53.2	-2.5	90	28	22	12	3.22	+0.07	0.74	15	3.0	9	12	7	12	s.	Helge Dyste.
Fullerton	Dickey	1,439	45	51.2	-3.6	91	28	20	12	2.01	-1.17	0.94	11	8.2	8	11	9	11	s.	F. O. Alin.
Grafton	Walsh	827	51	51.2	-2.9	85	22	26	7†	2.44	+0.27	1.13	30-31	T.	7	5	13	13	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	52	49.4	-4.8	79	20†	25	7†	3.55	+0.96	1.59	23	T.	13	8	11	12	nw.	University of N. Dak.
Grnd. Fks. Apt. 2 mi. WNW	Grand Forks	833	3	49.6	.....	83	21†	25	8	2.63	.....	1.16	23	T.	10	6	7	18	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	51.6	-6.4	87	28	25	12	3.27	+0.48	0.84	25	8.0	7	8	9	14	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	51	46.4	-5.2	83	22	20	7	2.32	+0.20	1.10	31	0.1	7	3	11	17	sw.	A. E. Prior.
Hillsboro	Traill	901	43	51.4	-3.4	81	20†	22	9	3.24	+0.15	0.71	24-25	T.	8	8	10	13	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	51	50.6	-3.5	84	28	21	11	1.91	-1.09	0.63	23	T.	6	7	10	14	nw.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE	Stutsman	1,494	3	49.4	.....	85	28	21	12	1.88	.....	1.00	23	T.	9	3	12	16	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	4	49.3	.....	82	22	18	7†	2.98	.....	2.05	23	T.	7	7	10	14	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	47	48.7	-3.1	83	22	18	7	2.20	+0.18	0.91	30-31	0.8	13	5	14	12	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	50	51.0	-2.4	83	22	23	8	2.41	-0.48	1.16	30-31	T.	10	9	4	18	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	39	50.4	-4.4	88	29	28	12	2.87	-0.05	0.67	16	T.	10	12	3	16	nw.	J. O. Halverson.
Mayville	Traill	975	47	52.2	-3.2	83	22	26	12	2.93	+0.02	0.70	30-31	0	6	9	2	20	n.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	21	48.6	-4.1	83	22	19	7†	3.40	+1.01	2.00	22-23	T.	10	9	5	17	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	32	50.4	-5.4	79	22	23	2	4.12	+0.85	1.40	15	3.5	9	16	6	9	sw.	J. G. Carlson.
McVille	Nelson	1,467	13	.....	.....	.....	.....	.....	.....	2.81	.....	0.65	24	T.	12	7	11	13	nw.	A. M. Casad.
Milnor	Sargent	1,117	4	52.0	.....	88	28	20	12	5.17	+1.96	1.45	15	10.0	9	14	11	6	ne.	E. W. Wilson.
Oakes	Dickey	1,318	14	49.4	-6.2	92	28	23	7	2.40	+0.32	0.61	11-12	11.0	10	13	1	17	s.	F. H. Murray.
Park River	Walsh	995	39	49.5	-4.1	82	22	22	7	2.12	+0.06	1.05	30-31	T.	7	15	6	10	nw.	E. J. Taintor.
Pembina	Pembina	789	69	48.8	-4.4	86	22	20	12	2.69	+0.33	0.97	23	0	13	1	19	11	nw.	S. W. Douglas.
Pembina Airport, 1 mile S.	Pembina	795	4	48.8	-4.4	86	22	24	6†	2.13	-0.23	0.78	23	T.	12	1	15	15	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	13	.....	.....	.....	.....	.....	.....	2.56	+0.56	1.17	30-31	0.1	11	9	9	13	nw.	T. M. Rykken.
Sharon	Steele	1,516	19	49.6	-4.5	82	20	23	13	3.32	+0.52	1.61	30-31	0.4	11	7	9	15	nw.	Nels O. Gresham.
Valley City	Barnes	1,245	37	52.0	-2.6	82	27	28	8	1.69	-1.11	0.56	4	T.	11	11	8	12	nw.	L. C. Robertson.
Wahpeton	Richland	962	51	53.4	-2.9	84	28†	24	8	2.90	+0.24	0.67	15	1.0	11	5	12	14	nw.	W. J. Cavanaugh.
Average for Eastern Division				50.4	-4.0	93	28	18	7	2.72	+0.19	2.05	28	1.5	10	8	9	14	nw.	.....
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	47	48.7	-5.5	94	28	20	7†	1.47	-1.07	0.43	23	2.6	7	5	12	14	w.	U. S. Airway Comm. Sta.
Beulah	Mercer	1,797	29	.....	.....	.....	.....	.....	.....	2.11	+0.01	0.65	31	1.0	11	7	9	15	nw.	Knife Rvr. Coal Mng. Co.
Bisbee	Towner	1,601	40	49.8	-2.9	87	23	20	7	2.11	+0.01	0.65	31	1.0	11	7	9	15	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	52.2	-2.6	92	28	22	7	1.99	-0.43	1.03	30	T.	6	7	10	14	nw.	U. S. Weather Bureau.
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	4	51.4	-1.6	94	28	22	7	2.05	-0.27	1.29	30-31	T.	5	7	10	14	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	51	51.2	-1.1	87	22	17	7	2.13	+0.06	0.99	30-31	0.2	11	15	5	11	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,890	17	50.2	-4.6	83	22	21	7	3.57	+1.10	2.54	30-31	0.5	9	6	3	22	nw.	R. L. Williams.
Carrington	Foster	1,579	45	49.4	-3.7	84	22	24	7†	1.97	-0.60	0.93	24	0.2	8	13	2	16	sw.	Soo Line Agent.
Carson, 2½ miles SW	Grant	2,500	31	50.8	-3.7	95	28	18	12	1.96	-0.49	0.62	30	4.0	8	8	16	7	sw.	J. W. Evans.
Center	Oliver	2,100	5	49.8	-4.7	84	28	20	7†	2.66	-0.43	1.43	30-31	T.	8	11	12	8	nw.	Fred L. Heinz.
Drake	McHenry	1,634	14	50.0	-4.7	85	22	23	7	1.69	-0.39	0.85	30-31	T.	6	9	4	18	s.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	47	47.8	-5.0	80	22	15	7	2.13	+0.29	0.66	30-31	T.	9	4	14	13	ne.	Geo. Gehres.
Eckman	Bottineau	1,500	38	49.2	-3.4	87	22	20	7†	2.61	+0.69	1.57	30-31	0.5	9	2	16	13	nw.	E. R. Sherman.
Fessenden	Wells	1,810	31	50.4	-2.9	84	22	22	7	1.47	-0.84	0.41	30	0.5	8	14	6	11	s.	John V. Zuber.
Fort Yates	Sioux	1,670	43	52.9	-3.8	96	28	18	7	3.76	+1.46	3.01	30	8.0	3	17	8	6	se.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	22	50.2	-4.0	85	22	23	11	2.51	+0.52	1.48	30-31	0.2	12	5	9	17	nw.	A. C. Bierbaum.
Gackle	Logan	1,951	13	49.0	.....	89	28	22	6	3.06	+0.75	1.75	31	0.6	9	6	14	11	nw.	E. H. Haut.
Garrison	McLean	1,925	66	49.4	-4.2	85	22	25	7†	2.56	+0.23	1.59	30-31	T.	10	6	11	14	nw.	E. L. Vorachek.
Granville	McHenry	1,504	36	.....	.....	.....	.....	.....	.....	1.59	.....	1.00	23	0	6	11	9	13	nw.	Fred Roble.
Hansboro	Towner	1,597	35	47.2	-4.3	86	22	19	7	1.67	-0.42	1.00	30-31	T.	11	9	9	13	nw.	W. E. Disher.
Harvey	Wells	1,596	40	.....	.....	.....	.....	.....	.....	2.13	-0.13	1.25	29-30	1.0	8	5	12	14	n.	Orville Hoksich.
Leeds	Benson	1,515	3	51.2	.....	91	20	21	7	1.79	.....	0.67	31	T.	6	5	14	12	s.	John Dulmage.
Linton	Emmons	1,711	26	52.4	-3.3	95	28	18	7	2.50	+0.09	1.26	30-31	3.0	10	7	10	14	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	28	50.6	-3.2	86	22	20	7	1.29	-0.82	0.42	23	0	6	6	10	15	nw.	A. T. Folland.
Mandan, 1½ miles SW	Morton	1,750	29	51.0	-4.1															

Climatological Data for May 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Western Division																					
Alpha, 1 mile S.	Golden Valley	2,908	16	20	49.8	-3.7	89	28	17	12	1.58	-0.85	0.39	23	T.	9	14	4	13	nw.	H.A. Bury.
Amidon	Slope	2,759	37	20	49.8	-3.7	89	28	17	12	1.30	-1.16	0.55	22-23	1.2	10	14	9	8	nw.	Stanley W. Bale.
Beach	Golden Valley	1,958	14	47.8	-3.6	88	22	25	11	2.79	+0.62	1.50	30-31	1.2	11	10	6	15	e.	Mrs. H. Russell.	
Bowbells	Burke	2,872	28	48.4	-5.2	87	28	18	12	1.37	-0.92	0.45	30	0.5	11	16	2	13	nw.	Charles Kaufman.	
Bowman	Bowman	1,954	34	48.0	-4.3	83	21	27	14	2.36	+0.42	0.66	10	3.5	8	5	15	11	n.	Oscar L. Erickson.	
Crosby	Divide	2,543	50	48.9	-3.8	89	28	21	12	0.99	-1.34	0.25	15	0.4	9	10	3	18	nw.	J.H. Phelps.	
Dickinson, 1 mile NW	Stark	2,577	3	49.4	-3.8	88	28	23	12	0.92	-0.31	0.30	30	0.6	9	5	10	16	nw.	Leroy Moomaw.	
Dickinson Airt., 5 1/2 mi. S.	Stark	2,191	43	48.4	-4.4	84	22	23	13	1.44	-0.95	0.42	15	T.	10	5	14	12	nw.	U.S. Airway Commr. Sta.	
Dunn Center	Dunn	2,082	49	50.8	-3.8	86	22	22	13	1.81	-0.43	0.68	22-23	T.	8	11	11	9	nw.	O.T. Evenson.	
Elbowwoods	McLean	2,224	32	49.7	-5.3	82	21	21	10	1.35	-0.83	0.30	14	0	9	10	13	8	nw.	H.W. Case.	
Epping	Williams	2,224	6	49.7	-5.3	82	21	21	10	1.35	-0.83	0.30	14	0	9	10	13	8	nw.	T. Beachler.	
Fairfield, 9 1/2 miles N.	Billings	2,790	24	49.0	-3.8	82	28	21	12	1.16	-1.23	0.33	23	T.	8	9	9	13	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N	Billings	2,781	3	48.1	-3.8	82	27	22	12	1.48	-0.43	0.51	23	T.	11	6	14	11	nw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,073	3	48.1	-3.8	82	27	22	12	1.48	-0.43	0.51	23	T.	12	6	11	14	w.	U.S. Airway Commr. Sta.	
Grassy Butte, 8 miles NNW.	McKenzie	2,073	14	48.1	-3.8	82	27	22	12	0.95	-1.16	0.65	14	T.	5	1	17	13	nw.	Fred Hartman.	
Halliday	Dunn	2,675	35	49.9	-1.8	90	28	20	12	1.54	-0.78	0.29	7	3.0	11	11	5	15	nw.	A.L. Gerhart.	
Hettinger	Adams	1,799	11	49.9	-1.8	90	28	20	12	1.54	-0.78	0.29	7	3.0	11	11	5	15	nw.	J.A. Springer.	
Kenmare	Ward	2,714	33	51.8	-1.8	90	28	20	12	1.54	-0.78	0.29	7	3.0	11	11	5	15	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,271	27	53.8	-0.8	96	28	20	12	0.82	-1.58	0.38	30	T.	8	18	6	7	nw.	S.P. Grane.	
Medora	Billings	2,424	35	51.8	-1.4	93	28	21	12	0.96	-1.02	0.30	23	0	7	11	6	14	nw.	Ovide E. Grenier.	
Mott	Hettinger	2,400	48	51.8	-1.4	93	28	21	12	0.96	-1.02	0.30	23	0	7	11	6	14	nw.	P.G. Wick.	
New England	Hettinger	2,400	48	51.8	-1.4	93	28	21	12	0.96	-1.02	0.30	23	0	7	11	6	14	nw.	F.S. Sleight.	
New Hradec, 1 mile E.	Dunn	1,929	27	47.1	-3.9	81	21	25	11	2.61	+0.54	0.84	30-31	3.5	11	11	11	9	nw.	Peter F. Ficek.	
Parshall	Mountrail	1,954	37	48.2	-4.3	81	22	27	11	1.76	-0.42	0.51	14-15	0	6	12	12	7	se.	C.E. Shubert.	
Portal	Burke	2,203	37	48.2	-4.3	81	22	27	11	1.76	-0.42	0.51	14-15	0	6	12	12	7	se.	U.S. Customs Service.	
Powers Lake	Burke	2,467	26	50.3	-3.6	86	28	23	12	1.15	-1.43	0.45	30	0.2	7	3	19	9	nw.	Geo. B. Gee.	
Richardton, 1 1/2 miles N.	Stark	1,835	17	48.0	-7.2	86	22	23	13	1.57	-0.33	0.63	13	0	6	5	17	9	nw.	Assumption Abbey.	
Sanish	Mountrail	2,258	5	47.7	-7.2	86	22	23	13	1.57	-0.33	0.63	13	0	6	5	17	9	nw.	H.J. Ruge.	
Stanley	Mountrail	2,279	14	47.7	-7.2	86	22	23	13	1.57	-0.33	0.63	13	0	6	5	17	9	nw.	Leroy Edwards.	
Tioga	Williams	2,279	14	47.7	-7.2	86	22	23	13	1.57	-0.33	0.63	13	0	6	5	17	9	nw.	B.V. Olson.	
Trotters	Golden Valley	1,864	17	49.6	-3.1	83	21	25	13	1.67	-0.30	0.34	23	T.	9	7	19	5	sw.	Walter Grunewald	
Van Hook	Mountrail	2,084	29	51.4	-3.1	83	21	25	13	1.67	-0.30	0.34	23	T.	9	7	19	5	sw.	V.L. Snyder.	
Watford City	McKenzie	2,254	15	50.9	-3.1	83	21	25	13	1.67	-0.30	0.34	23	T.	9	7	19	5	sw.	J.C. Zeller.	
Wildrose	Williams	1,878	63	50.9	-3.1	83	21	25	13	1.67	-0.30	0.34	23	T.	9	7	19	5	sw.	Fred E. Maucher.	
Williston	Williams	1,878	63	50.9	-3.1	83	21	25	13	1.67	-0.30	0.34	23	T.	9	7	19	5	sw.	U.S. Weather Bureau.	
Average for Western Division:				49.4	-4.1	96	28	17	12	1.66	-0.54	1.69	31	0.6	9	9	11	11	nw.		
Average for the State:				49.9	-3.6	96	28	15	7	2.21	-0.11	3.01	30	1.0	9	8	10	13	nw.		

Daily Temperatures for May 1943

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley ³	Maximum	69	53	71	62	69	43	53	53	65	64	34	40	55	52	45	52	60	67	71	72	79	79	62	50	50	55	73	94	70	69	71	61.4	
	Minimum	35	28	28	45	42	25	20	27	35	33	25	20	25	33	37	32	30	35	38	38	45	53	47	37	35	36	34	46	53	47	51	36.0	
Bismarck Airport ¹	Maximum	66	55	74	70	67	48	57	56	69	53	37	52	57	52	48	55	64	70	73	76	83	85	60	52	55	64	79	94	71	60	70	63.6	
	Minimum	42	36	33	52	47	30	22	34	38	36	29	25	27	35	41	38	35	37	37	38	48	51	51	39	37	36	40	48	55	48	54	39.3	
Bottineau ⁵	Maximum	56	55	72	72	69	45	53	58	84	45	47	56	61	64	60	68	73	85	86	85	83	87	82	46	47	64	84	85	78	72	62	67.2	
	Minimum	33	34	31	40	45	26	17	23	30	31	20	25	23	29	38	33	30	35	35	44	49	51	42	38	34	33	34	42	52	46	50	35.3	
Carson	Maximum	67	61	74	71	64	55	58	54	69	60	40	48	57	51	49	57	63	70	72	75	84	85	66	56	56	67	82	95	68	61	72	64.7	
	Minimum	33	35	33	48	48	30	23	30	30	38	25	18	27	38	40	37	31	32	36	36	45	45	48	38	30	29	44	53	49	46	49	36.9	
Crosby ⁵	Maximum	57	59	68	64	58	52	54	54	59	39	43	51	54	53	47	58	65	69	74	78	83	78	65	43	50	54	79	71	77	60	53	60.3	
	Minimum	27	35	34	36	44	28	29	30	33	29	27	28	28	33	40	38	36	38	40	43	45	48	33	29	27	30	50	48	46	46	35.7		
Devils Lake ¹	Maximum	53	52	67	55	65	47	47	50	65	50	40	49	58	60	48	55	65	71	75	79	80	84	62	50	43	47	67	75	69	56	61	59.5	
	Minimum	35	36	35	43	46	26	23	29	40	30	27	26	28	32	40	40	35	41	43	45	50	55	50	40	36	37	34	50	49	46	51	38.6	
Dickinson Airport ³	Maximum	62	58	70	72	59	54	56	54	65	53	36	46	54	49	53	54	61	66	70	73	79	82	60	48	56	65	82	88	66	53	70	61.7	
	Minimum	38	34	34	47	34	30	30	36	32	34	25	23	26	31	39	35	30	36	39	40	43	47	46	36	32	30	45	53	48	45	49	37.0	
Dunn Center ⁵	Maximum	61	58	72	71	61	51	54	55	65	42	37	50	59	50	49	56	62	68	73	75	82	84	62	47	55	65	84	80	70	51	70	61.9	
	Minimum	25	35	35	36	45	28	28	30	33	35	28	27	23	24	29	38	31	31	33	35	38	45	50	40	30	29	32	48	49	48	48	35.0	
Fargo Airport ¹	Maximum	56	50	70	60	66	54	45	54	68	70	42	52	60	66	53	54	65	72	78	80	80	80	67	54	45	48	66	81	71	72	72	62.9	
	Minimum	33	36	30	40	49	30	28	28	35	35	32	32	29	34	38	40	35	38	41	43	45	52	53	41	41	39	51	52	52	55	39.7		
Fessenden	Maximum	58	58	68	64	65	60	51	55	65	63	43	48	58	56	49	55	64	70	76	77	82	84	78	55	43	57	74	80	75	67	61	63.2	
	Minimum	34	36	35	44	44	28	22	29	36	36	27	26	28	30	41	39	34	38	42	43	48	52	44	38	34	39	37	48	43	41	52	37.7	
Fullerton	Maximum	69	59	71	60	68	58	51	55	65	65	42	44	58	62	51	54	64	70	76	77	79	78	67	52	48	51	71	91	75	73	71	63.9	
	Minimum	36	39	31	43	46	34	24	26	30	42	26	20	30	35	41	38	35	38	40	43	44	45	47	41	38	41	32	45	59	52	57	38.6	
Garrison ³	Maximum	60	55	71	68	62	49	52	53	64	45	42	52	52	57	51	50	58	64	69	73	76	81	85	61	48	54	64	77	80	70	55	64	61.6
	Minimum	33	36	34	46	43	27	25	32	35	33	28	25	27	30	41	39	25	35	37	39	46	47	48	35	34	29	43	49	52	48	51	37.2	
Golva ³	Maximum	64	60	72	76	62	53	53	53	61	49	34	47	53	47	49	50	60	65	70	73	80	78	60	55	59	66	82	81	72	55	71	61.6	
	Minimum	38	33	31	46	34	26	26	34	32	31	25	22	22	26	36	33	30	34	33	34	39	47	45	34	29	28	42	44	49	45	46	34.6	
Grafton	Maximum	55	55	69	65	69	64	64	67	65	45	53	60	62	62	60	68	72	78	82	83	85	82	60	47	46	64	76	74	68	63	64.5		
	Minimum	29	36	32	38	46	28	26	28	33	36	26	27	30	31	44	32	35	37	39	45	47	49	55	45	39	38	35	44	51	44	51	37.9	
Grand Forks Airport ³	Maximum	49	51	70	60	64	50	47	50	66	58	42	53	61	66	52	58	68	74	79	81	83	83	65	53	44	39	47	66	67	61	69	61.9	
	Minimum	31	34	32	42	46	29	26	25	32	31	28	27	30	31	44	32	30	34	38	36	41	45	49	53	42	35	40	39	40	47	46	51	37.4
Jamestown Airport ²	Maximum	60	52	71	54	67	47	51	53	69	62	37	51	59	63	50	55	64	70	76	79	82	83	63	51	42	49	69	85	68	64	68	61	61.0
	Minimum	34	35	32	31	45	27	22	26	33	33	30	21	29	33	39	39	34	36	36	39	44	48	50	39	36	35	31	50	50	49	51	37.0	
Kenmare ⁵	Maximum	55	58	68	60	60	51	50	55	61	40	44	54	57	54	50	56	63	70	75	77	81	83	68	40	55	64	78	77	76	60	61	61.2	
	Minimum	33	36	38	44	44	27	26	31	34	30	27	32	30	30	40	41	36	41	45	46	51	54	50	35	31	31	37	52	49	45	48	38.5	
Langdon	Maximum	52	56	71	64	64	58	47	49	65	60	45	54	59	62	56	61	65	73	76	80	78	83	79	57	52	45	64	70	70	64	59	62.5	
	Minimum	30	32	32	37	41	24	18	25	31	32	21	20	27	29	41	39	31	33	37	38	42	50	53	41	34	35	30	43	45	41	47	34.9	
Marmarth	Maximum	67	63	74	79	70	58	60	66	54	40	50	57	53	57	52	60	67	72	72	82	82	72	59	64	70	88	90	71	67	75	66	72	63.4
	Minimum	40	35	43	50	44	34	31	35	32	40	28	20	25	35	38	39	42	30	31	32	40	42	50	45	30	30	45	43	48	46	40	37.5	
Minot Airport ³	Maximum	56	52	65	63	63	45	50	54	64	42	40	49	56	53	48	56	64	70	75	77	81	85	66	46	53	61	78	74	73	55	60	60.5	
	Minimum	37	37	38	41	35	27	25	32	38	27	25	29	30	41	40	35	42	46	47	53	55	45	35	34	32	43	55	49	45	50	38.6		
Mott	Maximum	68	66	73	75	83	55	62	63	67	72	45	49	58	62	50	55	63	68	74	77	83	87	87	73	60	69	85	96	87	68	80	69.7	
	Minimum	46	35	35	50	40	32	28	37	32	40	27	20	25	33	42	39	30	32	35	36	47	46	49	39	33	30	44	47	53	47	50	38.0	
Pembina Airport ³	Maximum	46	54	69	64	60	37	45	48	67	44	42	51	59	64	55	60	67	71	78	81	84	86	65	53	44	46	67	77	69	65	59	60.5	
	Minimum	31	34	36	37	37	24	24	25	35	29	25	25	29	34	42	41	34	34	37	38	46	45	51	53	42	39	38	39	48	43	43	50	37.1
Sharon	Maximum	50	51	71	57	68	52	49	55	66	61	38	54	62	61	52	56	68	75	78	82	80	81	70	52	43	46	69	77	69	58	63	61.1	
	Minimum	33	37	30	46	44	27	26	25	34	38	27	25	23	29	39	38	35	35	38	39	41	51	52	43	36	37	34	47	52	46	52	37.4	
Steele	Maximum	64	58	70	64	65	56	52	56	67	61	59	48	56	57	46	56	64	68	73	75	90	82	73	50	47	48	74	91	69	60	67	63.4	
	Minimum	36	37	28	47	44	28	16	26	31	39	27	16	21	33	40	37	27	32	34	36	41	48	46	37	33	37	35	45	55	47	52	35.9	
Valley City	Maximum	60	60	70	67	67	64	58	52	67	66	47	52	61	65	60	53	65	72	77	79	80	80	77	60	46	48	82	78	68	68	68	65.0	
	Minimum	32	39	32	39	47	32	29	28	31	47	30	29	30	34	42	39	33	40	37	38	43	50	53	44	38	40	41	31	57				

Daily Precipitation for May 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton	Red.				.21	.14	.03									.90								.75	.12	.30	.02				.64	3.11		
Cooperstown	Sheyenne			.02	.28		.03																	.72	.47	.16			.11	.17	.38	.49	2.83	
Courtenay	James	T.			.22	T.										.03	T.							.94	.25	.16					.14	.30	2.06	
Devils Lake 1	Devils Lake	.11	T.	T.	.06	.01	.04								.07	.09	T.						.18	.67	.03	.17	T.				.27	.51	2.21	
Edgeley	James				.18	.08							.21	.02		T.								.78	.09	.08					.08	.21	1.73	
Edmore	Devils Lake	.12			.11													T.						.57	.01	.15					.46	.70	2.12	
Ellendale	James				.05	.08										.14								.30	.09	.03	.03				.03	.47	1.98	
Fargo 1	Red.	T.	T.	T.	.01	.07	.07					.76				T.								1.25	.62	.33	T.			.12	.25	.01	3.65	
Forman	Sheyenne				.24	.09	T.					.60				.74								.50	.25	.25	.06				.49	3.22		
Fullerton	James				.14	.15	T.					.94				T.	.15							.18	.05	.08				T.	.32	2.01		
Grafton	Red.	T.	.18	T.	T.	.07	T.									.60	.07							.66	.14	.19	T.			T.	T.	.13	2.44	
Grand Forks Airport 3	do		.03	.01		.19	T.									.17								1.16	.41	.30	.02			T.	.08	.26	2.63	
Hankinson 2	do	T.				.15	T.					T.	.59	T.		T.	.60	.05	T.						.75	.84	.29	T.		T.			.25	3.27
Hannah	Pembina		.37		.20		.10									T.	T.	T.						.25	.15	.15			T.		T.	.10	2.32	
Hillsboro	Red.	T.	T.	.03	.08	.30	T.									.69									.55	.71				.25		.63	3.24	
Jamestown Airport 3	James	T.	T.		.49	T.	.01								.01	T.				T.	T.			.01	1.00	.05	.08					.10	.13	1.88
Langdon	Pembina		.22	.02	T.	.18	.02	.07								.09		.05							.47	.09	.07	.02				.25	.66	2.20
Larimore	Red.		.05		.14	.03	T.									.03	.05							.42	.27	.26				T.	.13	1.03	2.41	
Lisbon	Sheyenne					.35	.07	.02					T.	.25		.05	.67								T.	.46	.25	.20					.55	2.87
Mayville	Red.															.30	T.							.67	.40	.36	T.		.50		.70	.29	2.93	
McHenry	James		.04		.11		.02									.10								2.00	.18	.24			.07	.31	.33	.40	3.40	
McLeod	Sheyenne				.21	.06	T.					.35				1.40								.70	.34	.54	.04					.48	4.12	
Oakes 2	James				.24	.08						.14	.47			.04	.42								.51	.11	.06					.33	2.40	
Park River	Red.		.09	T.	.05	T.	T.									.01	T.		.03	T.	T.				.65	.14	.11				T.	1.05	2.12	
Pembina Airport 3	do		.29	.01		.06	.11	.01			T.					.01	T.							.78	.24	.68	.01				.04	.49	2.13	
Petersburg	do		.01		.04	.01	.01									.06	.05								.73	.20	.28				.22	.95	2.56	
Sharon	do	T.		T.	.17	.02	.03									.05	.06								.46	.45	.19	T.		T.	.28	.40	1.21	3.32
Valley City	Sheyenne	T.			.56	.10	.05									.04									.47	.06	.06	.02			.05	.05	.23	1.69
Wahpeton	Red.	T.		.01	.05	.04	T.					.40				.67	.08								.44	.42	.50	.02				T.	.27	2.90
Middle Division																																		
Ashley 3	Missouri				T.	.25	T.				T.	.23				T.	T.	T.						.43	.01	T.			.05	.22	.28	1.47		
Bisbee	Devils Lake		.33		.04		.04					.04				.20	.02	T.						.26	.06	T.	.05				.42	.65	2.11	
Bismarck 1	Missouri	T.			T.	T.						T.	T.			.24	T.						.05	.46	T.			T.		1.22	.08	2.03		
Bottineau 2	Mouse		.32		.04		.01		.01			.04				.59		.04							.03	.01	.05					.99	2.13	
Butte	do		.13		.09	T.		.10							.10	.18		T.							.34	.09					.67	1.87	3.57	
Carrington 2	James					.02	T.									.04	.04								.49	.93	T.	.03				.33	1.97	
Carson	Heart				T.			.12				.28	T.		.12	.07	.04						.08	.26	.04						.62	.44	1.96	
Center	Missouri	T.				.07										.23	.07	.04							.85	.17					.43	1.00	2.66	
Drake 2	Mouse		.13			.07	T.									.18									.29	.17						.85	1.69	
Dunselth	do		.25	.04		.05	T.	T.	T.	.03						.57	.01											.18			.34	.66	2.13	
Eckman	do		.20		.04		.05	T.		.02						.09	.37								.27						.45	1.12	2.61	
Fessenden	James		.05		.06		.06									.27									.40	.05						.41	1.17	1.47
Fort Yates	Missouri				T.	T.						.75													.27						.26	.25	3.76	
Foxholm	Mouse		.24	T.	.06	.02	.01				T.					.12	.42		.03	T.					.06	.06	.01					.46	1.02	2.51
Gackle	James				.32	.02	T.					.12	.03			T.	T.					.03			.65	.10	T.			.04	T.	1.75	3.06	
Garrison 3	Missouri		.13			.03	.10									.35	.07		.02						.19	.08						1.08	.51	2.56
Granville	Mouse																T.								.11	.02	.02					.13	.87	1.67
Hansboro	Devils Lake	.16	.01		.05		.02				.06					.22	T.								.80	T.					.12	.14	2.50	
Linton	Missouri				.07	.06						.12	.01			T.	.13	T.	.04						.42	T.					.35	.28	1.29	
Maddock	Sheyenne	.09			T.											.35									.27	.17	T.				.09	1.07	1.95	
Mandan 2	Missouri		T.			T.						T.	T.			.57	.01	.06					.09	.10	.03						.10	.60	2.81	
Max 2	do		.30		.05	T.										.04									.74	.07	T.				.24	.06	3.85	
McClusky	do				.01		T.									.57	.10	T.	.02				.02	.06	.11						.13	.21	2.70	
Minot Airport 3	Mouse		.20	T.	T.	.02	T.				T.					.19	.27		.01						.23	.10						.35	1.39	2.78
Mohall	do		.16		.07		.10					.11				.10									.61	.16				.01	.09	.07	1.39	2.34
Napoleon 2	Missouri				.25		T.					.10				.28	.14																	

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LII

BISMARCK, N. D., JUNE 1943

No. 6

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GENERAL SUMMARY

Temperatures averaged considerably below normal, especially in the central and western divisions. Unusually cold weather prevailed during the first 10 days and again near the close of the month. Freezing temperatures on the 3d caused some crop damage in the western and northern parts of the state. The precipitation was well above normal and evenly distributed geographically and throughout the month. However, a few stations in the central and northeastern counties had less than 3.00 inches. Only five other Junes had more precipitation than that recorded this year. The outstanding feature of the weather during the month was the heavy snowfall in the northwestern part of the state on the 3d. It was the heaviest snowfall ever recorded in June. Ten inches fell at a few places in Mountrail County, and drifts several feet deep had to be removed from the highways. Crops were backward due to the cool weather, and considerable hail damage occurred.

TEMPERATURE

The mean temperature for the state was 60.4°, or 2.5° below the 1892-1943 average for June. The mean temperature for the eastern division was 62.0°; for the middle division, 60.2°; and for the western division, 59.0°. The highest mean temperature was 65.7° at Wahpeton, and the lowest, 56.0° at Powers Lake, making a range in mean temperature of 9.7°. The absolute range was 74°, from 102° at Mott on the 22d, to 28° at Golva on the 3d. The average daily deficiency in temperature for the state since January 1, 1943, is 2.0°.

PRECIPITATION

The average precipitation for the state was 5.07 inches, or 1.61 inches more than the 1892-1943 average for June. In the eastern division the average amount was 4.61 inches; in the middle division, 5.07 inches; and in the western division, 5.54 inches. The greatest monthly amount reported was 8.06 inches at Hankinson; the least was 2.41 inches at Larimore. The greatest amount recorded in any 24 consecutive hours was 3.45 inches at New Hradec on the 2d and 3d. The accumulated excess in precipitation for the state since January 1, 1943, is 2.26 inches. The average snowfall was 1.3 inches.

MISCELLANEOUS PHENOMENA
(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	9	6	1	1	4	4	3	..	1	5	2	2	8	3	2	..	..	..	..	..	..	..	..	..	..	4	18	4	..	2
Lunar halos ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Solar halos ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thundrstsms.	5	3	4	..	..	..	4	12	1	21	8	3	11	15	1	..	..	4	11	12	3	22	24	21	13	8	12	1	..	6	
Hail	1	1	..	..	..	..	..	..	2	..	..	..	..	1	..	..	1	..	1	4	..	10	6	4	3	..	..	1	1	2	

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.36	29	29.34	3	11.6	49	nw.	24	84	87	60	60	61	159
Devils Lake...	30.36	29	29.30	3	8.5	34	ne.	3	87	89	64	64	56	198
Fargo	30.34	29	29.17	4	11.0	55	nw.	24	89	88	65	69	47	126
Williston.....	30.30	29	29.41	1	7.4	27	nw.	20	80	83	60	56	65	199

† And other dates.

COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	60.5	94	28	3.59	4.44	2.03	3.35	0	8	11	9	10	
1893...	67.4	103	33	3.25	4.28	2.60	3.38	0	9	13	10	7	
1894...	68.8	103	25	4.08	2.31	3.93	3.44	0	7	17	6	7	
1895...	59.7	97	29	5.37	4.54	4.11	4.67	0	12	8	13	9	
1896...	65.6	97	37	3.06	4.33	4.68	4.02	0	9	16	9	5	
1897...	61.7	109	20	4.40	4.40	2.45	3.75	0	9	11	10	9	
1898...	62.6	105	26	3.17	3.21	3.18	3.19	0	9	10	10	10	
1899...	62.2	105	30	3.20	4.25	3.98	3.81	0	10	12	11	7	
1900...	66.9	109	27	1.59	1.54	1.04	1.39	0	5	15	11	4	
1901...	61.6	95	22	7.20	5.31	5.90	6.14	0	15	10	11	9	
1902...	58.0	97	28	3.67	3.75	3.53	3.65	0	11	12	9	9	
1903...	62.4	96	27	1.02	1.52	1.78	1.44	0	4	17	8	5	
1904...	61.4	100	30	5.95	5.92	4.82	5.56	0	11	13	8	9	
1905...	59.7	97	32	4.49	4.64	3.87	4.33	0	12	10	7	13	
1906...	62.0	95	32	3.80	4.21	6.34	4.78	0	11	13	8	9	
1907...	61.9	95	25	3.47	2.53	2.80	2.93	0	10	12	10	8	
1908...	60.4	93	27	2.91	3.63	3.70	3.41	0	10	12	9	9	
1909...	62.9	98	28	3.94	2.49	3.92	3.45	0	10	12	11	7	
1910...	67.3	111	19	1.26	1.85	3.00	2.04	0	6	16	9	5	
1911...	66.9	108	25	3.13	3.42	2.61	3.05	0	9	13	10	7	
1912...	61.8	104	28	2.27	2.11	1.65	2.01	0	6	16	8	6	
1913...	65.8	101	27	2.85	1.98	2.52	2.45	0	8	16	9	5	
1914...	62.2	93	29	5.67	7.13	6.64	6.48	0	13	9	11	10	
1915...	56.7	94	20	5.59	5.11	3.73	4.81	0	12	9	12	9	
1916...	58.0	92	29	4.06	3.51	4.05	3.87	0	11	10	11	9	
1917...	59.7	103	19	2.38	1.88	1.96	2.07	0	8	13	11	6	
1918...	63.3	102	27	2.23	1.53	0.97	1.58	0	7	14	11	5	
1919...	67.2	108	22	3.15	1.99	1.50	2.21	0	5	15	10	5	
1920...	62.2	98	26	3.64	3.74	3.20	3.53	0	11	12	12	6	
1921...	68.2	108	30	3.28	2.83	4.74	3.62	0	9	14	10	6	
1922...	63.5	108	30	3.38	3.55	4.44	3.79	0	9	15	8	7	
1923...	66.1	100	30	4.79	2.83	4.21	3.94	0	8	13	12	5	
1924...	58.6	89	26	3.45	4.51	4.17	4.04	0	11	10	12	8	
1925...	61.5	98	30	7.72	5.43	4.84	6.00	0	14	11	10	9	
1926...	60.7	104	22	2.66	2.47	2.71	2.61	0	9	13	9	8	
1927...	61.2	99	22	3.81	2.34	2.30	2.82	0	9	11	13	6	
1928...	58.2	92	24	4.83	5.30	4.53	4.89	0	12	10	10	10	
1929...	61.4	98	21	1.10	1.10	2.12	1.44	0	7	16	9	5	
1930...	63.3	96	30	2.31	3.42	3.53	3.09	0	10	13	11	6	
1931...	68.4	110	27	2.93	2.05	2.07	2.35	0	8	14	10	6	
1932...	67.0	98	34	3.33	3.61	4.83	3.92	0	10	14	10	6	
1933...	70.7	110	33	1.99	1.66	1.67	1.77	0	7	18	10	2	
1934...	64.3	100	29	3.74	2.85	2.54	3.04	0	11	12	10	8	
1935...	60.3	99	25	3.65	2.70	2.77	3.04	T.	10	11	12	7	
1936...	66.4	110	28	1.41	1.40	1.20	1.34	0	6	16	10	4	
1937...	63.5	109	25	3.04	5.62	3.43	4.03	T.	9	15	9	6	
1938...	64.2	99	27	1.82	2.87	3.49	2.73	0	9	11	11	8	
1939...	60.1	99	29	5.44	4.67	3.67	4.59	0	12	10	11	9	
1940...	63.1	102	27	2.02	2.10	2.60	2.24	0	9	13	11	6	
1941...	64.2	97	32	5.86	4.91	5.85	5.54	0	12	12	9	9	
1942...	60.1	90	27	2.81	2.81	3.75	3.12	0	11	9	12	9	
1943...	60.4	102	28	4.61	5.07	5.54	5.07	1.3	13	8	11	11	
Period	62.9	111	19	3.55	3.42	3.41	3.46	T.	9	13	10	7	

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Climatological Data for June 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Eastern Division																					
Casselton	Cass	961	47	64.2	+0.3	97	20	39	29	5.39	+1.68	1.62	2	0	12	14	12	4	s.	C. Hayford.	
Cavalier	Pembina	894	33	61.2		91	18	33	5	3.71	+0.51	0.77	3	0	13	7	6	17	n.	City Light & Power Co.	
Colgate	Steele	1,180	10							4.22		1.47	13-14	0	13	4	14	12	s.	M. H. Badger.	
Cooperstown	Griggs	1,428	46	62.8	-0.4	93	18	37	4	3.71	+0.38	1.20	14	0	11	4	10	16	nw.	R. J. Lockner.	
Courtenay	Stutsman	1,523	13							4.64	+1.78	1.66	14	0	9	4	14	12	nw.	G. H. Hanawalt.	
Devils Lake	Ramsey	1,478	46	59.5	-2.4	85	18	34	5	4.66	+1.10	0.87	2-3	0	18	3	14	13	n.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	42	61.6	-2.0	90	20	36	4	3.57	-0.09	0.80	2	0	10	10	9	11	n.	N. Dak. Agri. Exp. Sta.	
Edmore, 1 1/2 miles W.	Ramsey	1,524	19	58.0	-4.3	85	18	30	5	3.74	+0.48	0.89	3	0	11	18	10	2	nw.	Mike Davis.	
Ellendale	Dickey	1,457	48	63.0	-1.8	90	20	38	4	5.47	+2.19	1.18	2	0	14	8	10	12	ne.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	16	63.8	-0.6	93	20	41	4	5.64	+1.59	2.46	2-3	0	12	4	13	13	n.	U. S. Weather Bureau.	
Forman	Sargent	1,249	50	65.4	+0.4	94	20	40	4	7.58	+4.09	1.45	14	0	11	12	10	8	se.	Helge Dyste.	
Fullerton	Dickey	1,439	45	63.6	-0.6	90	23	38	4	6.09	+2.32	1.22	24	0	12	9	11	10	ne.	F. O. Alin.	
Grafton	Walsh	827	51	62.4	-1.3	91	18	37	5	3.91	+0.51	1.04	3	0	11	8	13	9	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	52	62.2	-1.2	93	18	35	29	2.70	-0.65	1.03	14	0	12	11	9	10	nw.	University of N. Dak.	
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	833	3	61.8		92	18	37	29	2.85		1.34	13-14	0	9	3	13	14	nw.	U. S. Airway Comm. Sta.	
Hankinson	Richland	1,068	14	64.7	-2.2	91	18	40	3	8.06	+4.75	1.29	27	0	14	7	10	13	.....	Soo Line Agent.
Hannah	Cavalier	1,568	51	57.3	-3.2	84	18	34	5	3.75	+0.36	0.95	3	0	10	3	19	8	nc.	A. E. Prior.	
Hillsboro	Traill	901	43	63.2	-1.5	92	18	39	4	4.17	+0.80	0.98	1-2	0	14	6	18	6	n.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	51	63.1	-0.6	94	18	37	4	5.33	+1.72	1.10	22	0	12	6	12	12	ne.	N. Dak. State Hospital.	
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	3	61.5		92	18	37	4	4.77		1.28	13-14	0	13	3	9	18	n.	U. S. Airway Comm. Sta.	
Kensal, 7 miles SW	Stutsman	1,440	4	60.8		90	18	31	5	4.41		1.93	13-14	0	11	4	14	12	nw.	U. S. Wildlife Refuge.	
Langdon, 1 mile E	Cavalier	1,615	47	58.6	-2.0	87	18	30	5	3.14	-0.26	0.82	3	0	15	8	13	9	nw.	W. Sturlaugson.	
Larimore	Grand Forks	1,134	50	61.0	-1.9	91	18	35	5	2.41	-1.45	0.83	14	0	12	3	10	12	nw.	W. L. Goodison.	
Lisbon	Ransom	1,091	39	63.7	-0.7	97	20	40	7	5.48	+1.64	2.13	3	0	14	8	3	19	nw.	J. O. Halverson.	
Mayville	Traill	975	47							2.71	-0.64	1.36	14	0	6				.....	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	21	59.9	-1.9	91	18	32	5	3.32	-0.16	0.81	3	0	14	4	13	13	n.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	32	63.2	-2.1	97	20	41	3	5.78	+1.77	2.00	2	0	10	14	10	6	sw.	J. G. Carlson.	
McVille	Nelson	1,467	13							4.94		1.92	1-2	0	13	5	20	5	se.	A. M. Casad.	
Milnor	Sargent	1,117	4	63.4		94	20	37	4	6.14	+2.39	1.81	2	0	8	16	9	5	ne.	E. W. Wilson.	
Oakes	Dickey	1,318	14	62.9	-2.4	91	20	38	4	7.56	+4.31	2.59	2	0	15	12	2	16	nw.	F. H. Murray.	
Park River	Walsh	998	39	59.4	-3.7	88	18	32	5	4.56	+1.17	1.22	3	0	9	14	11	5	nw.	E. J. Taintor.	
Pembina, 2 1/2 miles N	Pembina	789	69	60.4	-2.4	90	23	30	5	3.29	-0.04	0.92	3	0	11	4	21	5	nw.	S. W. Douglas.	
Pembina Airport, 1 mile S.	Pembina	795	4	60.4	-2.4	89	23	34	5	2.60	-0.73	0.85	2-3	0	9	3	13	14	nw.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,520	13							3.54	+1.05	1.90	2-3	0	15	8	10	12	ne.	T. M. Rykken.	
Sharon	Steele	1,516	19	61.6	-1.4	92	18	37	4	5.31	+1.55	2.08	13-14	0	13	4	11	15	nw.	Nels O. Grefshelm.	
Valley City	Barnes	1,245	37	63.2	-0.9	91	18	38	4	3.36	-0.10	0.84	14	0	11	11	11	8	nw.	I. C. Robertson.	
Wahpeton	Richland	962	51	65.7	-0.1	94	20	39	6	7.87	+4.16	2.30	27	0	13	4	19	7	nw.	W. J. Cavanaugh.	
Average for Eastern Division				62.0	-1.7	97	20	30	5	4.61	+1.06	2.69	2	0	12	7	12	11	nw.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,014	47	60.8	-2.4	88	18	35	3	3.95	+0.71	1.42	13	0	15	3	6	21	e.	U. S. Airway Comm. Sta.	
Beulah	Merced	1,797	29							6.55	+2.61	2.48	2-3	2.0	16	7	15	8	ne.	Knife Rvr. Coal Mng. Co.	
Bisbee	Towner	1,601	40	59.9	-2.2	88	18	33	5	3.48	-0.01	1.44	3	0	11	12	5	13	ne.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	69	62.7	-1.5	89	19	35	3	6.36	+3.16	1.53	3	T	14	8	10	12	nw.	U. S. Weather Bureau.	
Bismarck Airport, 2 1/2 mi. SE.	Burleigh	1,650	4	62.2	-0.7	90	22	36	3	6.44	+3.09	1.92	2-3	T	15	8	10	12	ne.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	51	62.6	+0.8	89	18	33	4	3.14	-0.18	0.84	4	0	10	18	2	10	nw.	N. D. School of Forestry	
Butte, 3 miles WSW	McLean	1,890	17	58.9	-3.6	83	18	32	3	4.85	+1.32	2.33	3	3.0	14	9	7	14	nw.	R. L. Williams.	
Carrington	Foster	1,579	45	60.3	-3.1	88	18	35	5	4.90	+1.38	0.85	2	0	16	9	6	15	e.	Soo Line Agent.	
Carson, 2 1/2 miles SW	Grant	2,500	31	61.5	-2.2	96	19	30	3	6.09	+2.59	1.50	1-2	3.5	12	11	10	9	se.	J. W. Evans.	
Center	Oliver	2,100	5	60.0		88	18	32	3	7.31		2.79	3	1.0	12	9	16	5	nw.	Fred L. Heinz.	
Drake	McHenry	1,634	14	59.8	-4.0	89	18	32	4	4.20	+1.29	1.50	3	5.0	14	12	4	14	nw.	H. G. Kringen.	
Dunseith, 2 miles NNE	Rolette	1,682	47	57.6	-3.8	80	18	32	3	3.33	+0.21	1.20	3	2.0	12	4	17	9	nw.	Geo. Gehres.	
Eckman	Bottineau	1,500	38	57.8	-4.2	83	18	31	3	4.36	+1.36	1.01	2-3	1.5	13	3	20	7	se.	E. R. Sherman.	
Fessenden	Wells	1,610	31	60.4	-2.2	87	18	34	4	3.33	-0.36	0.86	3	0	13	9	15	6	n.	John V. Zuber.	
Fort Yates	Sioux	1,670	43	63.0	-3.6	93	22	38	4	6.53	+3.07	1.53	3	0	10	16	6	8	nw.	P. J. Jacobson.	
Gackle	Ward	1,657	22	58.5	-3.4	81	22	32	3	5.72	+2.62	1.44	3	7.0	17	3	14	13	nw.	E. C. Bierbaum.	
Garrison	Logan	1,951	13	63.5		95	18	35	4	5.73	+1.96	1.64	14	T	11	7	11	12	n.	A. H. Haut.	
Granville	McLean	1,925	66	59.6	-3.3	89	18	33	3	4.85	+1.31	1.84	2-3	3.0	13	4	16	10	e.	E. L. Vorachek.	
Hansboro	McHenry	1,504	36	60.0	-2.7	84	18	32	3	4.17	+0.95	1.86	3	6.0	16	14	8	8	nw.	Fred Roble.	
Harvey	Towner	1,597	35	58.0	-2.8	84	18	32	5	3.13	-0.25	0.90	3	0	11	12	13	5	nw.	W. E. Dishar.	
Leeds	Wells	1,596	40							2.64	-0.93	1.17	3	0	13	8	10	12	nw.	Orville Hoksche.	
Linton	Benson	1,515	3	60.6		86	18	34	5	3.11		1.12	3	0	11	3	17	10	w.	John Dulmeier.	
Lynch	Emmons	1,711	26	63.5	-1.7	93	18	37	4	7.60	+4.44	1.47	13-14	0	19	10	4	16	nw.	Wm. Heyerman.	
Maddock, 1 mile E	Benson	1,604	28	60.1	-2.1	86	18	32	5	2.45	-0.92	0.53	3	20	0	14	4	15	11	nw.	A. T. Felland.
Mandan, 1 1/2 miles SW	Morton	1,750	29	61.4	-3.0	89	22	34	4	7.43	+4.14	2.44	3	T	12	10	3	17	nw.	No. Gt. Plains Field. Sta.	
Max	McLean	2,093	14	59.2	-4.4	87	18	32	4	5.48	+2.13	1.88	3	1.5	14	7					

Climatological Data for June 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Western Division																					
Alpha, 1 mile S.	Golden Valley	2,908	16	60.0	-2.8	94	22	30	31	4.27	+0.87	1.56	3	T.	14	15	8	7	se.	H. A. Bury.	
Amidon	Slope	2,759	20	60.0	-2.8	94	22	30	31	5.05	+1.69	1.22	3	T.	15	16	8	6	e.	Stanley W. Bale.	
Beach	Golden Valley	2,963	37	56.8	-3.0	80	21	32	4	5.91	+2.48	1.41	25	1.0	17	10	8	12	w.	Mrs. H. Russell.	
Bowbells	Burke	2,872	28	58.8	-4.6	95	22	32	31	4.50	+1.55	1.25	3	T.	14	7	5	18	se.	Charles Kaufman.	
Bowman	Bowman	1,954	34	57.5	-4.2	82	22	35	4	5.19	+1.83	1.25	15	0	12	6	13	11	w.	Oscar L. Erickson.	
Crosby	Divide	2,543	50	58.7	-3.4	94	22	32	4	4.11	+0.74	1.95	3	4.0	15	7	8	15	nw.	J. H. Phelps.	
Dickinson, 1 mile NW	Stark	2,577	3	58.7	-3.4	93	22	32	3	4.26	-2.16	2.16	2-3	3.0	9	3	11	16	nw.	Leroy Moomaw.	
Dickinson Airt., 5 1/2 mi. S.	Stark	2,191	43	57.8	-4.7	90	22	31	4	5.19	+1.32	1.84	3	10.0	12	4	16	10	se.	U. S. Airway Comm. Sta.	
Dunn Center	Dunn	2,082	49	61.0	-2.4	87	19	29	4	5.02	+1.15	2.00	3	T.	12	12	8	10	ne.	O. T. Evenson.	
Elbowoods	McLean	2,224	32	59.0	-4.1	87	22	32	3	6.50	+2.93	1.78	3	3.0	14	17	7	6	se.	H. W. Case.	
Epping	Williams	2,790	24	58.6	-3.2	89	22	32	31	4.85	+1.38	1.45	3	3.0	13	12	8	10	nw.	T. Beachler.	
Fairfield, 9 1/2 miles N.	Billings	2,781	3	58.1	-3.2	89	22	32	31	3.00	-0.30	1.50	3	4.0	12	7	13	10	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N.	Billings	2,781	3	58.1	-3.2	89	22	32	31	3.00	-0.30	1.50	3	4.0	12	7	13	10	nw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,073	3	58.1	-3.2	89	22	32	31	2.82	-1.25	2.58	2-3	T.	13	7	13	10	e.	U. S. Airway Comm. Sta.	
Grassy Butte, 8 miles NNW	McKenzie	2,073	3	58.1	-3.2	89	22	32	31	6.67	+3.63	2.19	2-3	6.0	13	12	7	11	sw.	Fred Hartman.	
Halliday	Dunn	2,675	35	58.6	-3.2	89	22	32	31	7.34	+4.28	1.90	3	2.0	13	14	3	13	nw.	A. L. Gerhart.	
Hettinger	Adams	1,799	11	58.6	-3.2	89	22	32	31	6.62	+3.56	1.80	2-3	1.0	16	9	11	10	se.	J. A. Springer.	
Kenmare	Ward	2,714	33	61.3	-2.1	92	22	33	4	3.64	+0.27	1.55	3	1.0	9	12	12	6	se.	Theo. E. Eckberg.	
Marmarth	Slope	2,271	27	62.2	-1.2	102	22	33	3	4.79	+1.57	1.26	3	T.	12	18	4	8	se.	S. P. Grane.	
Medora	Billings	2,424	35	63.8	-1.2	102	22	33	3	4.79	+1.57	1.26	3	T.	12	18	4	8	se.	Harry Roberts.	
Mott	Hettinger	2,400	48	60.4	-3.2	94	22	32	31	5.49	+1.47	2.44	2	T.	14	8	13	9	se.	P. G. Wick.	
New England	Hettinger	2,601	2	60.1	-3.2	90	22	32	31	6.20	+2.64	2.35	3	4.0	17	6	20	4	sw.	F. S. Sleight.	
New Hradec, 1 mile E.	Dunn	1,929	27	56.8	-3.2	89	22	32	31	5.33	+2.04	1.22	2	0	14	11	9	10	se.	Peter F. Picek.	
Parshall	Mountrail	1,954	37	57.1	-3.5	80	19	34	6	5.59	+1.99	1.05	14	0	13	9	16	5	sw.	C. E. Shubert.	
Portal	Burke	2,205	37	56.0	-5.5	80	19	32	2	5.54	+2.13	2.11	2-3	2.5	15	8	11	11	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,467	26	59.6	-3.5	90	22	31	31	7.50	+4.12	2.58	2-3	T.	15	9	12	9	e.	Geo. B. Gee.	
Richardton, 14 miles N.	Stark	1,835	17	57.8	-5.5	84	22	32	4	6.84	+1.96	3	11.0	0	14	8	17	5	w.	Assumption Abbey.	
Sanish	Mountrail	2,258	5	57.2	-5.5	84	22	32	4	7.50	+4.12	2.58	2-3	T.	15	9	12	9	.....	H. J. Bugge.
Stanley	Mountrail	2,279	14	57.2	-5.5	84	22	32	4	6.84	+1.96	3	11.0	0	14	8	17	5	w.	Leroy Edwards.	
Tioga	Williams	2,279	14	57.2	-5.5	84	22	32	4	7.48	+5.16	1.96	3	11.0	0	13	14	8	8	se.	B. V. Olson.
Trotters	Golden Valley	2,084	29	59.4	-3.7	89	22	31	3	4.94	+1.46	1.95	3	2.0	14	13	10	7	5	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	3	58.5	-3.2	89	22	32	31	5.58	+1.95	3	2.0	14	13	10	7	7	nw.	V. L. Snyder.	
Watford City	McKenzie	2,084	29	59.4	-3.7	89	22	31	3	6.13	+2.93	2.68	2-3	5.0	16	5	17	8	se.	J. C. Zeller.	
Wildrose	Williams	2,258	15	59.4	-3.7	89	22	31	3	6.29	+3.96	1.10	2	1.0	13	16	5	9	se.	Fred E. Maucher.	
Williston	Williams	1,878	63	59.4	-3.3	87	22	33	3	5.53	+2.10	1.42	2-3	T.	18	5	15	10	se.	U. S. Weather Bureau.	
Average for Western Division				59.0	-3.6	102	22	28	3	5.54	+2.13	3.45	3	2.5	13	8	11	11	9	se.	
Average for the State				60.4	-2.5	102	22	28	3	5.07	+1.61	3.45	3	1.3	13	8	11	11	11	nw.	

Daily Temperatures for June 1943

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley ³	Maximum...	81	58	54	49	50	61	58	69	70	70	74	73	70	78	71	69	80	88	80	86	79	84	88	73	87	84	74	63	67	60	.....	71.6
	Minimum...	49	51	35	36	41	41	43	46	42	42	57	55	51	56	52	50	50	60	58	59	50	55	64	54	61	60	52	41	36	49	.....	49.9
Bismarck Airport ¹	Maximum...	74	59	49	49	50	60	61	70	71	75	81	75	70	77	66	74	83	89	88	84	84	90	83	75	88	82	69	66	71	69	.....	72.7
	Minimum...	48	49	36	36	41	43	44	49	44	46	55	57	52	58	54	51	54	57	63	61	54	58	67	52	60	61	54	46	43	55	.....	51.6
Bottineau	Maximum...	75	64	41	59	68	71	74	83	78	82	88	75	75	78	74	82	84	89	86	86	84	85	88	83	83	83	81	73	79	80	.....	77.7
	Minimum...	39	51	36	33	38	34	36	50	42	46	54	50	39	54	50	43	48	59	57	58	48	59	63	52	61	50	54	40	37	47	.....	47.7
Carson	Maximum...	74	61	51	50	46	66	58	68	74	75	80	72	72	73	82	89	96	93	82	93	84	74	88	94	83	68	70	68	.....	74.4		
	Minimum...	48	49	30	32	40	39	47	46	37	47	50	50	54	47	48	50	55	60	64	49	53	62	53	52	60	55	39	42	50	.....	48.6	
Crosby ⁵	Maximum...	74	53	49	59	58	63	58	61	70	68	72	68	55	54	71	75	78	79	80	74	75	82	75	76	74	81	66	64	57	68	.....	67.9
	Minimum...	44	48	36	35	39	42	38	44	40	45	49	44	47	51	47	47	49	56	57	58	51	55	56	49	53	54	52	40	42	46	.....	47.1
Devils Lake ¹	Maximum...	74	58	48	52	54	57	64	69	65	71	78	66	66	69	59	73	77	85	80	80	79	75	83	77	72	74	70	60	66	68	.....	69.0
	Minimum...	46	47	38	36	34	43	42	47	47	41	56	53	51	54	52	48	52	60	58	59	54	58	64	58	58	57	52	44	40	47	.....	50.0
Dickinson Airprt ³	Maximum...	72	57	44	50	45	62	58	67	70	75	79	68	62	73	57	70	80	84	81	77	79	93	75	72	83	80	66	66	70	72	.....	69.6
	Minimum...	46	44	32	33	37	36	46	43	40	46	47	52	52	53	50	50	56	56	54	49	59	53	53	58	61	46	39	42	51	.....	47.8	
Dunn Center ⁵	Maximum...	72	57	39	52	50	61	60	68	70	74	78	67	61	64	70	68	81	85	86	88	79	90	84	76	78	82	68	66	70	70	.....	70.5
	Minimum...	41	47	37	31	35	39	41	44	42	42	45	46	52	52	50	42	40	42	41	43	44	54	54	45	52	47	00	45	46	50	.....	45.1
Fargo Airport ¹	Maximum...	74	63	70	49	54	62	67	70	69	71	76	72	72	82	73	67	80	91	87	93	84	76	89	74	85	80	77	64	67	69	.....	73.6
	Minimum...	50	52	47	41	46	45	44	50	51	46	57	54	52	63	57	56	53	60	65	67	61	57	69	54	61	63	60	46	42	48	.....	53.9
Fessenden	Maximum...	73	70	49	51	59	57	63	70	67	72	79	78	67	70	68	72	79	87	84	79	81	81	81	74	79	75	72	63	70	67	.....	71.2
	Minimum...	46	47	41	34	34	42	37	48	45	44	54	56	50	56	52	45	53	58	58	61	54	57	67	58	55	57	41	39	44	.....	49.7	
Fullerton	Maximum...	80	62	68	51	51	63	66	72	70	71	76	75	73	76	80	71	81	89	85	89	84	82	90	73	89	81	78	64	69	67	.....	74.3
	Minimum...	52	52	48	38	44	43	43	52	45	45	55	59	52	59	55	54	52	58	66	63	55	57	65	54	62	62	60	48	42	45	.....	52.8
Garrison ³	Maximum...	71	67	43	54	54	56	58	67	70	70	80	74	63	71	60	75	81	89	84	80	82	85	77	75	76	82	71	68	69	72	.....	70.8
	Minimum...	45	43	33	34	38	40	40	47	44	46	45	51	51	54	52	45	52	56	56	59	51	58	61	55	57	56	50	42	40	49	.....	48.3
Golva ³	Maximum...	72	59	45	50	45	60	62	67	70	77	75	66	59	68	60	71	81	82	83	75	79	94	76	75	82	85	67	70	74	81	.....	70.3
	Minimum...	45	44	28	32	34	34	47	40	33	44	42	45	63	52	48	50	49	51	59	48	45	63	56	53	58	57	42	35	35	51	.....	45.9
Grafton	Maximum...	72	69	69	60	54	62	66	66	66	73	79	79	79	74	71	70	75	74	91	90	85	84	80	89	88	80	79	71	69	72	.....	74.2
	Minimum...	46	53	44	38	37	43	43	44	47	44	56	57	50	56	53	51	53	58	59	58	55	53	67	62	53	56	60	45	38	43	.....	50.7
Grand Forks Airport ³	Maximum...	73	60	68	51	53	61	69	68	66	75	78	68	65	78	65	70	77	92	84	87	82	77	89	81	79	82	77	63	69	71	.....	72.6
	Minimum...	50	51	46	39	39	44	40	45	47	42	59	51	51	59	54	52	51	58	58	62	55	56	66	62	62	58	52	41	37	42	.....	51.0
Jamestown Airport ³	Maximum...	75	58	58	53	55	59	63	66	69	70	77	74	69	78	71	72	81	92	87	87	85	79	87	77	84	79	75	64	69	64	.....	72.6
	Minimum...	46	51	42	37	41	43	38	49	44	42	53	54	51	56	53	52	53	55	59	60	52	58	64	56	61	60	55	41	39	45	.....	50.4
Kenmare	Maximum...	74	51	42	59	52	58	59	65	70	68	76	68	60	57	69	76	78	81	80	77	77	81	74	78	70	80	73	65	70	70	.....	68.6
	Minimum...	46	50	34	32	39	38	38	48	41	44	50	45	50	51	48	46	56	59	57	56	53	60	60	52	60	55	54	41	43	50	.....	48.5
Langdon	Maximum...	73	62	56	55	54	58	67	65	67	70	81	74	62	60	60	76	75	87	82	82	78	76	85	80	78	75	63	71	70	.....	70.4	
	Minimum...	44	47	40	35	30	38	35	44	45	42	53	50	41	51	49	42	48	55	62	57	50	50	65	51	57	57	55	42	35	42	.....	46.7
Marmarth	Maximum...	72	70	55	51	48	64	62	68	70	77	81	67	67	73	65	75	82	85	83	81	80	92	80	74	87	83	77	70	71	80	.....	73.0
	Minimum...	46	54	33	35	40	37	50	46	36	50	45	53	54	57	52	45	49	60	60	61	50	58	57	50	60	63	56	41	46	55	.....	49.6
Minot Airport ³	Maximum...	69	55	41	56	54	56	61	67	66	70	78	66	62	62	66	74	79	83	78	78	77	84	75	78	69	78	70	62	70	70	.....	68.5
	Minimum...	47	41	32	33	42	42	39	47	44	45	52	50	50	52	60	47	56	62	57	57	56	58	61	54	59	56	50	43	40	47	.....	49.0
Mott	Maximum...	82	80	62	52	52	65	62	70	73	82	82	81	71	76	72	75	83	90	87	84	87	102	89	82	89	85	69	76	77	.....	77.4	
	Minimum...	44	51	33	34	35	40	48	50	38	45	50	55	56	56	54	52	49	54	61	59	49	63	61	56	60	62	57	42	39	52	.....	50.2
Pembina Airport ³	Maximum...	71	64	52	52	57	59	70	69	66	76	82	63	62	65	62	75	67	88	82	84	78	89	80	74	82	75	58	69	72	.....	70.7	
	Minimum...	50	48	42	37	34	43	45	45	46	46	56	54	48	55	52	47	52	56	56	60	56	53	65	59	60	54	58	42	38	42	.....	50.0
Sharon	Maximum...	76	64	63	53	51	60	69	66	67	74	80	73	64	77	69	80	92	85	84	83	75	91	80	80	77	77	63	73	66	.....	72.6	
	Minimum...	44	52	45	37	38	40	42	45	44	44	55	55	49	56	52	50	52	59	60	60	52	57	69	57	60	57	59	43	39	45	.....	50.6
Steele	Maximum...	79	65	51	48	50	58	58	63	64	72	79	73	68	75	75	70	73	87	86	83	81	84	81	75	85	72	60	66	65	.....	70.8	
	Minimum...	46	51	39	35	35	45	39	40	39	40	50	55	49	57	47	48	50	47	58	63	50	57	66	47	58	58	59	43	38	47	.....	48.5
Valley City	Maximum...	75	69	65	54	55	59	63	70	66	71	78	76	70	79	77	68	82	91	89	86	84	80	87	83	84	84	77	68	67	.....	74.1	
	Minimum...	45	53	48	38	43	42	39	50	46	42	55	59	51	60	56	53	51	59	61	64	54	56	70	56	63	62	64	46	40	41	.....	52.2
Wahpeton	Maximum...	78	65	71	71	58	64	67	70	70	72	75	77	76	82																		

Daily Precipitation for June 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Casselton	Red.	T.	1.62	.40	.02				.08		T.	.40		.03	.94		.04						.34		.58	.01		.93			T.		5.39		
Cooperstown	Sheyenne		.24	.80	.03				.04			.28		.48	1.20	T.	.03						.40		.16	.05		T.					3.71		
Courtenay	James	T.	.39	.50	T.	.04			.11		T.	.36		.60	1.66	T.							.48	T.	.50	T.	T.	T.					4.64		
Devils Lake 1	Devils Lake		.20	.25	.76	.07	.05				.56	T.	.31		.10	.25	T.						.11	.18		.19	.35		T.				4.66		
Edgely	James		.21	.80	.17	T.			T.	.37		T.	.14		.41	.23							.23		.71		.30						3.57		
Edmore	Devils Lake			.89				.11			.20			.43		.40	T.						.13	.48		.19	.28		.57		.06		3.74		
Ellendale	James		.31	1.18	.10				.10		.33			.47		.53	.41						.10		.99	.02		.06			.01		.04	5.47	
Fargo 1	Red.	T.	2.41	.11	.01				.02		.02	T.	.77		.19	.51	T.	T.					.33		.62	.10		.01	.56	T.			5.64		
Forman	Sheyenne	1.30	1.32	.08	.11						.56			.27		1.45		T.					.38		.78			.19	1.14			T.	7.58		
Fullerton	James		.25	1.08	.12	.03	T.			T.	.40			.63		.28							.95		1.22		.22	.54					6.09		
Grafton	Red.		.09		1.04	T.		.05		.39	.11			.30		.53	.02						.35		.07	.96							3.91		
Grand Forks Airport 3	do		.20	.68	1.27	.10	T.				.36			.05	.01		.55						.03	T.	.03	.13							2.85		
Hankinson 2	do		.60	T.	.95	.05	T.				.25					.50	T.						.05	.50		T.	.20		.60		.05	T.	3.75		
Hannah	Pembina			.98	.57				.05					.20		.05	.80	.02	.02	.07				.05	.50		.40	.55					4.17		
Hillsboro	Red.		.15	.70	.26	.01	T.				.56		.28		.02	1.26	.02	T.	T.				.73	.01	.65	T.		.12					4.77		
Jamestown Airport 3	James		.02	.02	.82	.03					.14	.01		.11			.44	.04					.04	.33		.61		.48	T.	.03	.02		T.	3.14	
Larimore	Red.			.17	.74	.04	T.				.10			.18		.08	.83		.10	.02				.07		.05	.03						2.41		
Lisbon	Sheyenne		.03	.22	.13	.03					.23			.27		.06	.70							.20	.55	.30		.10	.16	.50			5.48		
Mayville	Red.			.60							.20					1.36								.25		.20				.10			2.71		
McHenry	James		.04	.44	.81	.09			.21			.32		.03	.50	.01							.31	.15	.10	.30		.01					3.32		
McLeod	Sheyenne		.50	2.00	.25				.05			.51		.62									.64		.79		.12	.30					5.78		
Oakes 2	James		.08	2.59	1.47	.04			.03	.27		.26		.31	.27									.55	.79	.36	.14	.20	.20				7.56		
Park River	Red.		.23	.03	1.22		T.		.41		.68				.54	T.							.11		.12		1.22						4.56		
Pembina Airport 3	do		T.	.35	.52	.04	T.		.25	T.	.08				.64	T.							.18		.23		.31						2.60		
Petersburg	do			1.05	.85	.07		.05	.01		.02			.33		.61		.02	.12				.04	.17	.05	.07							3.54		
Sharon	do			.47	.37	.04	T.		.55			.22		.27	1.81	.03	.38						.24	.12	.79				.02				5.31		
Valley City	Sheyenne		.02	.34	.44		T.		.18			.38		.12	.84			.04					.35		.64				.01				3.36		
Wahpeton	Red.			1.35	.70	T.	T.				.15			.10		.71		.09	T.				.79		.68	.20	.55	2.30	.23				7.87		
Middle Division																																			
Ashley 3	Missouri		.08	.13	.06	T.	.08	.06	.19	.45		.06		.19	1.42									.21	.14	T.	.12	.08	.33	.25	.17	.22		3.95	
Bisbee	Devils Lake			.08	1.44	.05			.46			.08			.30									.18	.36		.28	.01	T.	.10				3.48	
Bismarck 1	Missouri		.01	.62	.85	.03	.20		.04	.09		.01		.11	1.16																		6.44		
Bottineau 2	Mouse				.55	.84				.15					.03	.09								.18	.36								3.14		
Butte	do			.30	.23	.16	T.	.05	T.	.05				.46	T.	.07	.11						.42	.20		.59	.04	.04	T.	.03			4.85		
Carrington 2	James		.13	.85	.72	.73	.02	.16		.37				.25		.07	.74	.16	T.					.02		.04	.41	.14	.09				4.90		
Carson	Heart			1.50	1.29	.05	.25	.03	.06	.31					.79	.74												.66	.07		.34		6.09		
Center	Missouri			.75	.79	T.	.23					.74			.32	.60	T.						.11		.03	.98	T.	.18		.15		.43	7.31		
Drake 2	Mouse		T.	.02	1.50	.89	T.	.10				.25		.05	.03								.40	.64		.10	.03	.05		.03			4.20		
Dunseith	do		T.	.10	1.20	.08	T.		.23					.04	.02	.25							.22	.45		.01		.65		.08			3.33		
Eckman	do			.59	1.01	T.	.11	.04		.14		.07			.05	.28	.21						.38	.61		.32		.55					4.36		
Fessenden	James			.09	.86		.30	.05		.13				.54	.30	.09	.48						.02		.25		.14	.08					3.33		
Fort Yates	Missouri			.27	1.53	T.	.25		.55					1.20	1.45												.01	.03	.28	.30	.12	.58		T.	6.53
Foxholm	Mouse		.03	.90	1.44	.01	.01	.03	.06	T.		.23			.08	.37	.22		.15					.46	.40		.01	.03	.12	.29				5.72	
Gackle	James			.26	.64	.19	.08		.16			.46			.64	1.64										.56		.71		.39			5.73		
Garrison 3	Missouri			.91	1.29		.10		.06			.35			.13	.15	.02						.58		.52	.29				.11			4.85		
Granville	Mouse		T.	.27	1.86	.08			.08		.03	.18			.12	.16	.12		.01				.25	.60		.02	.12		.17		.10		4.17		
Hansboro	Devils Lake			.13	.90	.05			.07						.57											.14	.45		.09	.02			3.13		
Linton	Missouri		.65	.65	.76	.06	.18	.03	.05	.34		.50	.05	.32	1.25	1.47										T.	.05	.33	.05	.18	.38		.30	7.00	
Maddock	Sheyenne			.08	.50	.07		.19	.06			.18			.02	.18	T.						.20	.53		.21	.08	.05	.10				2.45		
Mandan 2	Missouri			.52	2.44	.37		.20		.48				.11		.62	.76										T.	1.33	T.	.52	T.		.03	.05	7.43
Max 2	do			.03	1.88	1.00		.13		.30	.01			.90		.15	.03						.02	.46		T.	.55		.01		.01		5.48		
McClusky	do			.32	2.02	.09	.14	.08				.34			.50	.24	.01						.29		.19		.12						4.34		
Minot Airport 3	Mouse		.01	.90	1.51	T.	T.		T.		.17	T.	.01	.12	.18	.38	.04	</																	

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LII

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No. 7

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GENERAL SUMMARY

Temperatures averaged above normal but no unusually high readings occurred. The precipitation was about normal and was quite well distributed throughout the month. The warm weather and above normal sunshine were favorable for crops and the prospects were for much better than average yields. By the close of the month oats and barley were being cut, wheat was ripening rapidly and the early corn was beginning to tassle. Hail and windstorms were numerous and severe. Damage amounting to millions of dollars resulted from wind and hailstorms. The most severe storms occurred on July 12th when all sections had losses from hail or wind or both. Several hundred barns were destroyed and many houses damaged. The greatest havoc occurred in a strip about 100 miles wide, extending from the extreme southwestern part of the state northeastward to Grand Forks County. The greatest hail damage occurred in Hettinger County where many farmers suffered 100% losses. Hail losses were heavy in all sections of the state.

TEMPERATURE

The mean temperature for the state was 70.5°, or 1.5° above the 1892-1943 average for July. The mean temperature for the eastern division was 71.9°; for the middle division, 70.3°; and for the western division, 69.4°. The highest mean temperature was 74.2° at Casselton, Mayville, and Milnor, and the lowest, 67.5° at Hannah and Sanish, making a range in mean temperature of 6.7°. The absolute range was 62°, from 103° at New England on the 31st, to 41° at five stations in the west on the 2d, 4th, 14th, and 27th. The average daily deficiency in temperature for the state since January 1, 1943, is 1.5°.

PRECIPITATION

The average precipitation for the state was 2.72 inches, or 0.27 inches more than the 1892-1943 average for July. In the eastern division the average amount was 2.88 inches; in the middle division, 3.14 inches; and in the western division, 2.13 inches. The greatest monthly amount reported was 6.09 inches at Rolla; the least was 1.05 inches at Watford City. The greatest amount recorded in any 24 consecutive hours was 4.51 inches at Hansboro on the 11th. The accumulated excess in precipitation for the state since January 1, 1943, is 2.53 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	5	5	5	1	8	1	2	3	..	2	4	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lunar halos ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Solar halos ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thunderstms. ..	23	16	5	13	20	1	1	3	3	19	34	41	23	1	..	5	4	18	..	14	..	13	11	3	8	18	15	29	11	13	..
Hail	5	1	..	1	1	..	..	..	1	3	6	9	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.17	27	29.58	15	8.9	61	w.	12	84	87	53	50	87	2
Devils Lake	30.17	27	29.59	12	7.1	44	n.	12	83	84	54	56	82	2
Fargo	30.13	27	29.59	12	10.2	48	w.	12	84	86	58	58	77	2
Williston	30.18	26	29.55	11	5.6	26	e.	11	78	83	56	43	83	9

† And other dates.

COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	68.7	108	31	3.44	2.98	3.28	3.23	0	8	19	8	4	
1893...	69.5	112	35	2.54	1.94	1.64	2.04	0	7	17	10	4	
1894...	71.7	107	38	0.92	0.73	0.25	0.63	0	3	20	8	3	
1895...	66.1	102	29	3.12	2.44	3.13	2.90	0	8	14	11	6	
1896...	67.5	107	31	1.67	1.48	1.37	1.51	0	6	15	10	7	
1897...	68.9	109	38	6.46	4.43	2.40	4.43	0	9	13	11	6	
1898...	67.6	106	28	3.07	2.40	2.00	2.49	0	7	15	11	5	
1899...	68.3	109	32	2.37	2.30	2.35	2.34	0	6	18	9	4	
1900...	67.9	107	33	2.89	2.26	1.60	2.25	0	6	16	10	5	
1901...	70.8	110	40	5.10	4.08	3.66	4.28	0	6	18	7	6	
1902...	67.6	106	34	2.34	2.00	2.10	2.15	0	5	20	7	4	
1903...	66.7	109	26	2.59	1.77	2.32	2.23	0	7	17	8	6	
1904...	64.4	102	34	2.96	2.83	0.60	2.13	0	6	17	8	6	
1905...	65.6	100	32	4.27	3.90	3.17	3.78	0	8	17	9	5	
1906...	66.9	102	34	2.90	1.32	0.45	1.56	0	11	13	8	10	
1907...	65.8	103	31	2.69	3.90	2.60	3.06	0	9	16	11	4	
1908...	68.6	103	31	1.89	2.37	1.46	1.91	0	6	19	9	4	
1909...	67.1	99	34	3.45	2.94	1.80	2.73	0	8	15	9	7	
1910...	70.0	114	33	1.30	2.10	1.40	1.60	0	5	18	9	4	
1911...	65.1	107	23	2.25	1.76	1.10	1.70	0	6	18	10	3	
1912...	66.0	106	30	4.52	3.07	3.38	3.66	0	10	12	13	6	
1913...	65.6	103	35	2.64	2.38	1.65	2.22	0	8	17	8	6	
1914...	72.1	109	36	2.62	1.85	2.03	2.17	0	6	19	9	3	
1915...	62.3	97	30	2.42	2.66	4.30	3.13	0	11	12	11	8	
1916...	73.1	105	33	4.71	2.76	1.41	2.96	0	7	19	9	3	
1917...	70.9	114	27	1.96	1.80	0.87	1.54	0	7	17	11	3	
1918...	65.5	102	34	2.84	2.90	2.46	2.73	0	7	14	10	7	
1919...	71.2	105	37	3.15	1.11	1.32	1.86	0	5	18	10	3	
1920...	68.3	103	31	2.27	2.33	1.73	2.11	0	7	18	11	2	
1921...	71.4	110	35	4.47	2.87	1.88	3.07	0	7	17	10	4	
1922...	65.6	100	30	2.28	2.44	2.72	2.48	0	8	16	11	4	
1923...	71.2	103	35	2.90	3.34	2.91	3.05	0	8	16	11	4	
1924...	65.5	99	32	1.93	2.04	1.83	1.93	0	6	18	9	4	
1925...	66.7	106	29	1.43	1.33	1.30	1.35	0	6	18	9	4	
1926...	70.3	108	32	2.35	1.78	1.99	2.04	0	7	18	8	5	
1927...	65.4	97	28	2.33	3.11	3.09	2.84	0	9	15	10	6	
1928...	67.4	96	38	4.65	5.32	4.49	4.82	0	10	16	10	5	
1929...	70.6	109	34	1.93	1.09	0.78	1.27	0	5	21	8	2	
1930...	72.3	107	34	1.83	0.80	0.49	1.04	0	5	21	8	2	
1931...	70.6	111	37	2.89	3.20	3.01	3.03	0	8	17	8	6	
1932...	70.0	108	36	1.95	2.22	1.68	1.95	0	7	19	8	4	
1933...	71.9	109	36	2.04	2.13	1.83	2.00	0	7	19	9	3	
1934...	71.8	112	29	1.58	1.30	0.77	1.18	0	6	18	10	3	
1935...	73.8	110	45	3.90	5.44	3.90	4.41	0	10	17	11	3	
1936...	79.9	121	38	0.71	0.48	0.92	0.70	0	4	22	8	1	
1937...	71.7	111	40	3.70	2.70	2.40	2.93	0	9	15	10	6	
1938...	69.7	104	39	3.11	3.85	3.05	3.34	0	9	15	13	3	
1939...	72.6	108	37	1.57	1.82	2.04	1.81	0	7	19	9	3	
1940...	71.6	107	37	4.29	3.75	3.05	3.70	0	11	14	13	4	
1941...	70.8	106	34	1.40	1.65	2.23	1.76	0	8	15	12	4	
1942...	67.1	97	36	2.71	2.86	1.73	2.43	0	7	13	13	5	
1943...	70.5	103	41	2.88	3.14	2.13	2.72	0	8	19	9	3	
Period	69.0	121	23	2.77	2.49	2.08	2.45	0	7	17	10	4	

NAT.
HIST.

Climatological Data for July 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Eastern Division																					
Casselton	Cass	961	47	74.2	+4.3	96	31	52	20†	3.32	+0.53	1.46	12-13	0	10	27	4	0	s.	C. Hayford.	
Cavalier	Pembina	894	33	73.0	.....	95	8	52	27	1.90	-0.77	0.72	12	0	5	17	7	7	nw.	City Light & Power Co.
Colgate	Steele	1,180	10	.....	.....	.....	.....	.....	.....	1.59	.....	0.57	13	0	9	17	11	3	s.	M. H. Badger.
Cooperstown	Griggs	1,428	46	73.0	+3.4	96	31	49	17	3.20	+0.74	1.46	5	0	9	18	10	3	nw.	R. J. Lockner	
Courtenay	Stutsman	1,523	13	.....	.....	.....	.....	.....	.....	2.18	-0.13	0.81	12	0	7	21	9	1	s.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	71.2	+3.8	92	22	51	17	2.27	-0.30	1.03	12	0	11	15	10	6	s.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	42	71.6	+1.7	97	31	50	6†	3.60	+0.83	1.11	12-13	0	8	19	11	1	se.	N. Dak. Agri. Exp. Sta.	
Edmore, 1½ miles W.	Ramsey	1,524	19	69.0	+1.5	89	31	49	17†	3.17	+0.42	1.45	12	0	5	22	7	2	nw.	Mike Davis.	
Ellendale	Dickey	1,457	48	71.5	+0.6	96	31	51	14	2.96	+0.22	0.82	13	0	7	24	5	2	nw.	J. E. Demmer.	
Fargo Airport, 2½ mi. NNW	Cass	895	16	73.0	+5.1	95	31	55	12	2.52	-0.91	0.73	11-12	0	11	17	9	5	s.	U. S. Weather Bureau.	
Forman	Sargent	1,249	50	73.3	+3.2	96	31	51	17	4.11	+1.14	1.00	27	0	7	24	5	2	s.	Holge Dyste.	
Fullerton	Dickey	1,439	45	71.6	+1.4	95	31	51	14	3.52	+0.40	0.86	12-13	0	9	18	12	1	s.	F. O. Alin.	
Grafton	Walsh	827	51	72.6	+3.8	92	31	51	27	6.01	+3.46	4.07	12	0	7	13	14	4	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	52	72.0	+3.5	94	31	50	27	3.44	+0.69	1.51	11-12	0	8	18	10	3	nw.	University of N. Dak.	
Grand Forks Apt. 2½ mi. W	Grand Forks	833	3	71.8	.....	93	31	53	27	3.47	.....	1.66	11	0	6	14	12	5	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	73.6	+2.2	98	31	52	6	2.02	-0.37	1.05	18	0	8	13	18	0	se.	Soo Line Agent.	
Hannah	Cavalier	1,568	51	67.5	+1.3	87	9	50	17	5.75	+3.40	3.55	11	0	7	9	16	6	sw.	A. E. Prior.	
Hillsboro	Traill	901	43	72.6	+1.9	96	31	52	17	1.53	-1.15	0.69	13	0	7	21	7	3	nw.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	51	72.4	+2.8	97	31	52	27	2.32	-0.46	0.87	12-13	0	7	19	9	3	sw.	N. Dak. State Hospital.	
Jamestown Airport, 2 mi. NE	Stutsman	1,494	3	70.6	.....	95	31	50	27	2.31	.....	0.69	12-13	0	9	16	13	2	w.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	4	70.5	.....	93	31	48	27	2.14	.....	0.88	12-13	0	5	19	12	0	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	47	69.0	+2.7	89	31	47	27	2.68	+0.31	1.19	11	0	9	15	13	3	w.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	50	72.0	+3.9	95	31	49	27	2.56	-0.66	0.97	12	0	8	17	8	6	sw.	W. L. Goodison.	
Lisbon	Ransom	1,091	39	72.3	+1.9	96	30	50	1	2.61	-0.58	0.77	18	0	12	18	4	9	nw.	J. O. Halverson.	
Mayville	Traill	975	47	74.2	+4.0	94	31	53	17	1.30	-1.46	0.50	12-13	0	5	20	10	1	nw.	H. B. Addicot.	
McHenry, 3 miles NE	Eddy	1,509	21	69.8	+1.7	90	31	49	27	3.43	+0.67	1.42	12	0	10	19	9	3	nw.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	32	73.4	+2.0	96	31	50	15†	1.42	-1.55	0.69	18	0	6	26	2	3	sw.	J. G. Carlson.	
McVille	Nelson	1,467	13	.....	.....	.....	.....	.....	.....	2.69	.....	1.13	12-13	0	4	11	20	0	s.	A. M. Casad.
Milnor	Sargent	1,117	4	74.2	.....	96	31	52	14	2.08	-0.89	0.75	18	0	5	25	6	0	sw.	E. W. Wilson.
Oakes	Dickey	1,318	14	71.5	-0.2	95	31	54	14†	2.41	+0.22	0.87	18	0	10	18	5	8	nw.	F. H. Murray.	
Park River	Walsh	998	39	70.7	+2.2	91	8†	50	27	4.04	+1.54	1.64	12-13	0	6	25	5	1	nw.	E. J. Taintor.	
Pembina, 2½ miles N	Pembina	789	69	70.8	+3.0	93	8	51	17	2.36	+0.01	1.52	13	0	3	12	15	4	se.	S. W. Douglas.	
Pembina Airport, 1 mile S.	Pembina	795	4	71.4	+3.6	95	8	48	27	1.53	-0.82	0.91	12-13	0	4	9	18	4	s.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,520	13	.....	.....	.....	.....	.....	.....	4.12	+1.22	1.89	12	0	9	20	8	3	sw.	T. M. Rykken.
Sharon	Steele	1,516	19	72.6	+1.8	96	31	49	17	2.66	-0.04	1.23	22-23	0	10	15	12	4	w.	Nels O. Grofsheim.	
Valley City	Barnes	1,245	37	71.7	+1.6	95	31	51	17	1.89	-0.92	0.75	12-13	0	7	23	6	2	sw.	I. C. Robertson.	
Wahpeton	Richland	962	51	73.4	+2.5	93	12†	52	27	2.78	-0.44	0.81	30-31	0	11	13	16	2	se.	W. J. Cavanaugh.	
Average for Eastern Division				71.9	+2.4	98	31	47	27	2.88	+0.11	4.07	12	0	8	18	10	3	nw.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,014	47	69.5	-0.2	96	31	59	1†	4.01	+1.18	1.55	12-13	0	13	7	14	10	se.	U. S. Airway Comm. Sta.	
Beulah	Mercer	1,797	29	.....	.....	.....	.....	.....	.....	4.72	+2.44	1.86	1-2	0	8	24	6	1	nw.	Knife Rvr. Coal Mng. Co.
Bisbee	Towner	1,601	40	70.0	+2.6	93	8	47	17†	2.27	-0.32	1.40	12	0	5	21	7	3	nw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	69	72.0	+1.5	96	31	52	14†	1.91	-0.31	0.43	27	0	10	17	12	2	se.	U. S. Weather Bureau.	
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	4	72.6	+3.2	95	31	52	17†	2.15	-0.09	0.50	4-5	0	10	17	12	2	se.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	51	71.8	+4.2	93	9	45	27†	3.74	+1.37	2.91	11	0	5	26	2	3	nw.	N. D. School of Forestry	
Butte, 3 miles WSW	McLean	1,880	17	68.8	-1.2	87	9	47	27	2.70	+0.10	0.78	11	0	9	19	4	8	nw.	R. L. Williams.	
Carrington	Foster	1,579	45	71.0	+1.6	94	31	49	17	2.59	+0.01	1.71	12	0	8	17	5	9	.....	Soo Line Agent.
Carson, 2½ miles SW	Grant	2,500	31	71.2	+0.4	100	31	47	17	1.44	-0.59	0.38	1	0	8	24	5	2	nw.	J. W. Evans.	
Center	Oliver	2,100	5	69.6	.....	95	31	43	17†	1.80	.....	0.45	27-28	0	11	15	16	0	nw.	Fred L. Heinz.
Drake	McHenry	1,634	14	71.3	-0.3	94	8	48	27	1.35	-1.50	0.38	1	0	6	19	4	8	w.	H. G. Kring.	
Dunseith, 2 miles NNE	Rolette	1,682	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	Geo. Gehres.
Eckman	Bottineau	1,500	38	68.2	+0.2	90	8†	47	27	5.58	+3.35	3.15	11	0	8	17	9	5	sw.	E. R. Sherman.	
Fessenden	Wells	1,610	31	71.2	+1.8	92	9†	50	17	2.10	-0.23	0.70	11	0	9	19	9	3	e.	John V. Zuber.	
Fort Yates	Sioux	1,670	43	73.2	+0.5	98	31	50	13†	2.02	-0.17	1.00	12	0	5	26	5	0	nw.	P. J. Jacobson.	
Foxholm, 6½ miles NE	Ward	1,657	22	68.8	-0.9	89	9†	50	16†	3.88	+1.48	0.96	11	0	10	15	9	7	sw.	E. C. Bierbaum.	
Gackle	Logan	1,951	13	72.4	.....	97	24	42	1	3.53	+0.99	1.18	12-13	0	6	14	15	2	s.	A. H. Haut.
Garrison	McLean	1,925	66	69.7	+0.5	94	31	47	17	2.70	+0.24	0.92	12	0	7	13	15	3	w.	E. L. Vorachek.	
Granville	McHenry	1,504	36	69.8	+1.1	94	10	50	17	4.54	+2.37	2.80	11	0	10	22	7	2	nw.	Fred Roble.	
Hansboro	Towner	1,597	35	68.1	+1.8	88	9	46	27	5.97	+3.51	4.51	11	0	7	17	10	4	nw.	W. E. Disher.	
Harvey	Wells	1,596	40	.....	.....	.....	.....	.....	.....	1.47	-0.77	0.57	4	0	8	18	8	5	nw.	Orville Hoksche.
Leeds	Benson	1,515	3	71.7	.....	92	5†	47	1	2.99	.....	0.84	11	0	7	13	15	3	w.	John Dulmage.
Linton	Emmons	1,711	26	72.7	.....	96	31	48	17	3.01	+0.88	1.00	5	0	7	18	11	2	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	28	71.5	+2.6	95	22	46	27	1.69	-0.90	0.75	28	0	9	14	15	2	nw.	A. T. Felland.	
Mandan, 1½ miles SW	Morton	1,750	29	72.2	+0.3	95	31	50	27	1.77	-0.61	0.53	13	0	10	15	11	5	se.	No. Gt	

Climatological Data for July 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Alpha, 1 mile S.	Golden Valley	2,908	16	70.4	0.0	99	31	47	13	3.26	+1.20	1.87	1	0	7	24	5	2	se.	H. A. Bury.
Amidon	Slope	2,759	37	69.4	-0.5	98	31	47	13	3.27	+1.05	1.58	2	0	7	24	7	0	nw.	Stanley W. Bale.
Beach	Golden Valley	1,958	14	67.8	+1.3	90	24	42	16	1.88	-0.32	0.56	12	0	15	21	3	0	w.	Mrs. H. Russell.
Bowbells	Burke	2,872	28	69.6	-1.3	98	31	47	17	2.60	+0.47	1.23	1	0	7	22	4	0	w.	Charles Kaufman.
Bowman	Bowman	1,954	34	67.8	-0.1	91	24	46	27	1.49	-0.62	0.56	11	0	8	17	9	5	nw.	Oscar L. Erickson.
Crosby	Divide	2,543	50	68.9	-0.1	99	31	45	6	1.82	-0.35	0.98	12	0	9	23	3	5	n.	J. H. Phelps.
Dickinson, 1 mile NW	Stark	2,577	3	69.2	0.0	98	31	49	27	2.11	0.84	1	0	0	6	17	7	7	nw.	Leroy Moomaw.
Dickinson Airt., 5 1/4 mi. S.	Stark	2,191	43	68.4	-0.6	96	31	45	27	1.65	-0.58	0.63	13	0	6	18	12	1	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,082	49	70.0	+0.1	98	7	44	17	2.67	+0.31	1.10	27	0	5	20	9	2	se.	O. T. Evenson.
Elbowoods	McLean	2,224	32	69.7	-1.1	94	31	46	15	1.74	-0.24	0.64	10	0	7	25	5	1	nw.	H. W. Case.
Epping	Williams	2,271	27	73.8	+2.2	102	22	48	8	1.46	-0.68	0.51	2	0	7	27	3	0	nw.	T. Beachler.
Fairfield, 9 1/4 miles N	Billings	2,400	48	70.3	-0.2	103	31	41	27	1.68	-0.39	1.05	1	0	7	18	13	0	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	24	69.9	0.0	96	31	48	13	1.21	-0.98	0.71	12	0	3	19	9	3	nw.	Verne King.
Golva, 1 mile E	Golden Valley	2,781	3	68.8	0.0	100	31	44	6	1.28	0.84	12	0	0	7	16	14	1	w.	U. S. Airway Comm. Sta.
Grassy Butte, 8 miles NNW	McKenzie	2,073	3	71.6	-0.1	101	31	41	3	1.74	-0.62	0.60	12	0	6	24	7	0	e.	Fred Hartman.
Halliday	Dunn	2,675	35	69.9	-1.8	90	8	50	16	3.60	+1.31	1.30	9-10	0	12	19	4	0	nw.	A. L. Gerhart.
Hettinger	Adams	1,799	11	69.9	-0.4	99	31	45	29	2.22	+0.34	0.96	12	0	7	21	7	0	nw.	J. A. Springer.
Kenmare	Ward	2,714	33	70.8	-0.4	99	31	45	29	2.22	+0.34	0.96	12	0	7	21	7	0	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,271	27	73.8	+2.2	102	22	48	8	1.46	-0.68	0.51	2	0	7	27	3	0	se.	S. P. Grane.
Medora	Billings	2,424	35	70.3	-0.2	103	31	41	27	1.68	-0.39	1.05	1	0	7	18	13	0	w.	Harry Roberts.
Mott	Hettinger	2,400	48	70.3	-0.2	103	31	41	27	1.68	-0.39	1.05	1	0	7	18	13	0	se.	P. G. Wick.
New England	Hettinger	2,400	48	70.3	-0.2	103	31	41	27	1.68	-0.39	1.05	1	0	7	18	13	0	se.	F. S. Sleight.
New Hradec, 1 mile E	Dunn	2,675	35	69.9	-1.8	90	8	50	16	3.60	+1.31	1.30	9-10	0	12	19	4	0	se.	Peter F. Fieck.
Parshall	Mountrail	1,929	27	67.8	-1.8	92	24	41	27	2.48	+0.48	0.56	12-13	0	11	16	15	0	se.	C. E. Shubert.
Portal	Burke	1,954	37	68.0	0.0	90	8	46	16	1.99	-0.12	0.40	11	0	12	21	3	0	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	37	69.5	-1.6	93	31	48	12	2.66	+0.07	1.00	27	0	6	16	15	0	w.	Geo. B. Gee.
Richardton, 1 1/4 miles N	Stark	2,467	26	70.0	-1.1	96	31	42	1	2.22	-0.03	1.33	1	0	6	18	11	2	se.	Assumption Abbey.
Sanish	Mountrail	1,835	17	67.5	-3.2	93	9	41	14	2.87	+0.82	0.77	13	0	10	19	12	0	.....	H. J. Bugge.
Stanley	Mountrail	2,258	5	67.6	0.0	91	9	41	27	3.51	0.99	11-12	0	0	8	17	10	4	w.	Leroy Edwards.
Tioga	Williams	2,279	14	70.8	+1.9	95	24	48	27	1.81	-0.08	0.64	9	0	10	14	13	4	.....	B. V. Olson.
Trotters	Golden Valley	1,864	3	68.7	0.0	95	9	43	18	1.97	-0.03	0.91	12	0	5	11	20	0	sw.	Walter Grunewald.
Van Hook	Mountrail	2,084	29	70.4	-0.7	97	31	44	27	1.05	-0.78	0.98	12	0	3	18	13	0	nw.	V. L. Snyder.
Watford City	McKenzie	2,258	15	70.8	+1.9	95	24	48	27	1.71	-0.02	0.85	28	0	6	30	1	0	sw.	J. C. Zeller.
Wildrose	Williams	1,878	63	69.4	-0.5	103	31	41	27	2.13	+0.05	1.87	1	0	8	20	8	0	w.	Fred E. Maucher.
Williston	Williams	1,878	63	69.4	-0.5	103	31	41	27	2.13	+0.05	1.87	1	0	8	20	8	0	nw.	U. S. Weather Bureau.
Average for Western Division				69.4	-0.5	103	31	41	27	2.13	+0.05	1.87	1	0	8	20	8	0	nw.	
Average for the State				70.5	+1.5	103	31	41	27	2.72	+0.27	4.51	11	0	8	19	9	3	nw.	

Daily Temperatures for July 1943

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley ³	Maximum...	75	78	81	80	74	81	83	85	85	88	85	68	86	76	73	80	82	82	87	78	85	84	88	90	89	81	85	87	89	96	82.8		
	Minimum...	50	55	55	60	54	50	57	58	62	64	59	61	51	50	56	53	51	57	56	54	54	56	60	60	62	58	56	58	55	52	59	56.2	
Bismarck Airport ¹	Maximum...	82	80	81	84	77	85	86	89	91	87	90	88	72	87	84	73	85	85	93	83	91	88	92	92	86	85	85	87	90	95	85.7		
	Minimum...	55	57	60	59	63	57	59	61	64	68	66	57	55	52	62	56	52	60	59	59	56	63	66	63	66	60	52	61	58	60	59.6		
Bottineau\$	Maximum...	85	84	86	89	88	88	90	92	93	90	81	84	88	86	91	78	88	86	88	90	84	88	86	83	89	85	84	88	90	88	88.7		
	Minimum...	55	56	50	62	60	54	58	63	65	63	61	60	64	52	60	50	47	60	58	56	51	59	61	52	63	60	45	45	56	53	60	56.7	
Carson	Maximum...	81	80	81	82	77	85	86	85	90	90	91	85	72	88	89	78	86	87	89	93	94	85	91	95	93	89	90	89	89	94	100	87.2	
	Minimum...	53	51	55	52	55	51	58	61	64	62	66	54	51	48	51	52	47	56	52	57	54	51	61	58	61	58	53	52	55	55	60	55.3	
Crosby \$	Maximum...	75	75	87	84	64	83	88	89	84	81	78	72	72	81	78	71	82	84	82	83	85	78	70	91	88	76	85	84	86	91	90	81.2	
	Minimum...	55	53	56	56	58	52	58	61	60	60	58	56	52	50	54	47	49	53	53	55	51	52	56	53	55	65	46	48	54	54	54	54.3	
Devils Lake ¹	Maximum...	76	76	80	83	79	82	85	90	90	85	87	78	71	83	84	72	79	82	79	88	79	92	79	88	85	78	78	83	89	86	92	82.5	
	Minimum...	56	58	56	57	60	57	63	67	65	68	63	59	56	56	58	57	51	62	61	59	56	60	61	65	66	58	54	59	61	61	63	59.8	
Dickinson Airport ³	Maximum...	82	79	77	79	76	80	85	85	88	85	78	72	70	83	83	70	82	82	84	91	84	93	82	94	92	88	89	87	88	90	98	83.7	
	Minimum...	50	52	56	52	54	50	55	61	61	60	56	54	50	52	56	50	51	55	55	58	51	64	62	56	60	54	49	54	55	50	57	54.8	
Dunn Center \$	Maximum...	78	77	77	81	76	82	88	89	92	85	78	73	70	83	84	70	82	83	83	87	89	81	93	90	80	87	87	88	90	96	83.3		
	Minimum...	52	53	54	56	53	49	54	56	57	60	64	60	51	49	53	49	48	50	53	56	51	51	63	56	57	65	45	47	48	50	51	53.6	
Fargo Airport ¹	Maximum...	72	82	82	84	86	85	87	89	90	91	90	88	72	84	83	77	84	80	85	89	80	86	86	88	87	88	81	82	91	89	95	84.9	
	Minimum...	56	63	61	62	61	57	62	67	69	67	66	65	58	56	61	57	55	58	63	57	60	58	69	66	65	62	55	61	58	56	65	61.2	
Fessenden	Maximum...	80	76	82	82	75	82	89	89	92	87	89	82	80	82	82	79	81	90	87	79	89	81	92	82	90	88	80	82	82	89	87	90	83.8
	Minimum...	73	55	55	55	60	52	59	60	63	63	64	63	57	52	55	57	50	55	59	56	53	58	61	65	65	63	50	59	59	59	60	58.6	
Fullerton	Maximum...	75	81	80	82	74	82	85	87	87	86	87	87	80	83	82	75	82	81	82	88	79	86	86	86	90	92	78	83	87	87	95	83.7	
	Minimum...	54	62	54	64	62	63	60	63	64	63	60	64	60	51	57	61	53	59	63	56	56	56	64	66	66	54	60	61	58	63	59.6		
Garrison ³	Maximum...	80	78	80	84	77	83	87	89	92	87	79	77	67	83	85	72	83	84	82	88	82	91	74	89	88	79	85	85	86	89	94	83.2	
	Minimum...	53	53	54	56	60	55	57	59	61	61	64	58	55	51	55	50	47	59	57	56	52	58	63	60	61	55	48	58	54	55	57	56.2	
Golva ³	Maximum...	81	82	81	81	78	84	90	88	95	86	81	70	72	87	80	73	84	85	87	91	87	94	83	96	98	82	92	88	88	92	100	85.7	
	Minimum...	53	53	51	47	50	44	48	63	58	57	57	54	47	48	51	50	50	54	49	56	48	63	59	53	59	49	45	51	50	47	48	52.0	
Grafton	Maximum...	70	81	87	88	87	87	88	91	89	88	84	76	85	85	82	80	81	82	87	89	89	82	87	87	83	82	83	87	88	92	85.1		
	Minimum...	56	57	56	60	60	59	61	65	61	68	65	63	63	57	58	63	53	57	62	55	59	60	63	66	67	60	51	56	60	58	62	60.1	
Grand Forks Airport ³	Maximum...	71	81	86	86	86	87	90	92	92	92	90	85	76	85	85	76	80	81	82	88	78	86	83	88	84	82	82	83	87	88	93	84.6	
	Minimum...	56	60	55	58	60	56	60	62	62	68	65	65	57	56	57	58	54	56	60	54	58	55	65	65	63	58	53	56	57	55	63	58.9	
Jamestown Airport ³	Maximum...	76	79	83	81	75	84	86	85	86	88	86	85	71	83	80	73	82	82	87	80	88	86	88	89	90	82	85	90	90	95	83.9		
	Minimum...	53	60	55	56	56	52	59	59	64	62	61	59	55	54	58	56	51	60	58	52	56	53	65	60	63	58	50	58	57	57	61	57.4	
Kenmare\$	Maximum...	76	76	82	85	77	84	88	90	90	84	78	74	70	82	84	72	82	84	82	85	80	82	74	90	82	76	82	85	86	88	89	81.9	
	Minimum...	56	56	54	54	60	56	60	66	61	61	59	60	55	55	57	50	51	60	57	61	53	62	59	57	60	64	50	60	58	58	61	57.9	
Langdon	Maximum...	71	78	84	85	82	83	86	88	87	84	83	79	75	80	78	75	80	78	84	81	83	79	85	81	80	80	86	86	86	89	81.9		
	Minimum...	54	67	51	56	58	53	57	62	57	64	61	58	54	53	58	56	49	54	56	53	51	57	59	61	57	56	47	52	57	53	61	56.2	
Marmarth	Maximum...	82	81	79	80	79	80	87	87	93	87	83	75	72	86	83	78	84	84	87	92	86	95	85	95	93	91	97	96	93	99	86.3		
	Minimum...	55	60	55	51	50	47	50	67	63	60	61	61	48	46	58	51	55	53	50	63	51	67	63	51	64	65	50	57	45	47	49	55.3	
Minot Airport ³	Maximum...	78	75	79	87	74	83	90	90	92	83	75	72	69	83	85	71	80	83	79	84	80	84	78	90	84	74	83	83	82	86	84	81.2	
	Minimum...	54	58	56	58	60	58	61	64	60	62	62	56	56	55	57	52	53	61	58	62	53	62	62	62	62	56	52	59	60	58	64	58.5	
Mott	Maximum...	83	90	87	84	81	92	91	94	100	91	89	83	75	89	91	78	95	90	92	97	93	102	98	99	99	94	98	90	94	99	102	91.6	
	Minimum...	62	52	57	52	52	58	57	61	64	65	55	50	57	53	51	50	56	54	58	50	65	58	62	61	48	55	50	49	54	54	55.9		
Pembina Airport ³	Maximum...	69	82	85	91	92	86	88	95	94	89	92	80	75	83	86	74	77	84	79	87	81	87	84	87	82	78	81	85	85	86	88	84.3	
	Minimum...	56	58	55	59	59	57	61	63	63	67	68	64	60	53	59	60	52	56	61	52	58	56	60	65	63	57	48	55	58	52	57	58.5	
Sharon	Maximum...	72	83	88	88	85	89	93	95	90	89	84	78	86	84	77	81	87	86	87	84	88	83	90	85	82	84	80	93	91	96	86.1		
	Minimum...	54	60	55	59	60	56	59	62	63	66	63	64	60	53	60	60	49	60	61	53	55	59	64	65	67	59	52	58	57	59	63	59.2	
Steele	Maximum...	76	76	79	80	70	80	83	84	85	85	84	85	76	80	79	75	80	80	80	87	76	87	82	86	87	85	81	80	85	86	92	81.6	
	Minimum...	52	53	54	59	60	53	58	59	60	65	63	61	56	58	50	58	46	57	56	56	53	57	64	61	65	63	49	58	56	55	60	57.3	
Valley City	Maximum...	73	81	80	81	79	83	87	87	90	89	87	85	83	83	83	77	83	80	84	86	85	86	84	85	88	80	83	90	90	95	84.4		
	Minimum...	55	61	58	54	59	53	59	60	64	64	62	67	62	53	57	62	51	59	62	53	56	55	67	63	76	64	52	57	56	57	62	59.0	
Wahpeton	Maximum...	74	80	82	84																													

Daily Precipitation for July 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Casselton	Red		.43			.30	.03							1.46			.33	.32									.05		.13	.17		.10	3.32		
Cooperstown	Sheyenne		.15			1.46								.03	.77				.05					.10				.26		.18	.20		3.20		
Courtenay	James		.27			.19								.81					.09		.14							.28		.40		2.18			
Devils Lake 1†	Devils Lake	T.	.02			.18					.01	.01	1.03	T.					.06		.03		.01	T.				.85	.06	.01		2.27			
Edgeley	James		.17		.10	.57								1.11			.23	T.	.83									.15	.44			3.60			
Edmore	Devils Lake					1.01				.25		.16	.30	1.45																		3.17			
Ellendale	James				.34	.30								.82			.19		.52				.10				T.		.69			2.96			
Fargo 1†	Red	.04	.19			.58						.05	.23	.50			T.		.29		T.		T.					.18	.14	.15	.17	T.	2.52		
Forman	Sheyenne	.29				.33			.41					.22			.93		.93		.93		T.					1.00					4.11		
Fullerton	James	.08			.22	.38								.86			.13		.80		.07			.15				T.	.83				3.52		
Grafton	Red	.03				.63			.42		T.		1.12	2.95									.22	.64				T.					6.01		
Grand Forks Airport 3	do	T.	.10			T.				T.	1.66	.24	.08			T.			1.05	.24			1.32	T.				.07		T.	T.		3.47		
Hankinson 2	do	.09	.01			.02								.10	.08															.43	T.	T.	2.02		
Hannah	Pembina	.20	.05			.90						3.55	.40	.25									.40										5.75		
Hillsboro	Red	.20												.69			.08		.06				T.	.22				.18		T.	T.		1.53		
Jamestown Airport 3	James	.50	.02		.05								.48	.21			T.		.44		.10		T.	T.				T.	.25	.26			2.31		
Langdon	Pembina	.23			.02	.38			.15			.27	.92	.40					.01				T.	.30									2.68		
Larimore	Red	.01			.31								.97	.55									T.	.39				.15		.16		.02	2.56		
Lisbon	Sheyenne	.23				.10								.36	.50		.04	.10	.77	.05		.04							.38	.02	.02		2.61		
Mayville	Red				.35								.10	.50					.05				.30										1.30		
McHenry	James		.15			.30			.53				.07	1.35					.09				.08					.60		.23	.03		3.43		
McLeod	Sheyenne	.03				.05								.37					.69		T.									.17		.11	1.42		
Oakes 2	James	.02	.12			.16								.62	.03			.07	.62	.25	T.			.09					T.	.43			2.41		
Park River	Red				1.02							.64	.05	1.64									.36							.33			4.04		
Pembina Airport 3	do	T.	T.			T.						.40	.61	.30									.22										1.53		
Petersburg	do				.53				T.	.22			.42	1.89					.05		.01		.03	.47		.05	.20		.21		.04	T.	.31	4.12	
Sharon	do	.08			.06								.16	.75			T.			.05		.01											2.66		
Valley City	Sheyenne	.39			.06	.09							.75				T.		.39		.01									.20		T.	1.89		
Wahpeton	Red	.19				.10							.23	.15			.03		.69			.08			.06				.04		.34		T.	.81	2.78
Middle Division																																			
Ashley 3	Missouri	.03		.02	.64	.22				.01				.71	.84			.33		.36			T.	.07				.03		.71	.04		4.01		
Bisbee	Devils Lake	.26												1.40	.25	.24																	2.27		
Bismarck 1†	Missouri	.37			.27	.23				.19		.01	.46	.03			T.	T.	.10			T.		.09			T.	T.	.40	T.			2.15		
Bottineau 2	Mouse	T.	.12			.04								.62	.05	T.																	3.74		
Butte	do	.13	.30			.34					T.	.78	.24	.23					.10			T.	T.							.53		.05	2.70		
Carrington 2	James	.02				.24					T.	T.		1.71					.05		.04												2.59		
Carson	Heart	.20	.38	.07	T.							T.	.22	.30						.16		.05	.23	.13	.03				.11				1.44		
Center	Missouri	.35								.07	.04	.03	.35							.05		.23				.04			.03	.45			1.80		
Drake 2	Mouse	.39								T.	.17	.18	.36							.08			T.							.17		T.	1.35		
Dunseith	do																																		
Eckman	do					.28					.64	3.15	.46	.27						.05		T.						.69		.04		T.	5.58		
Fessenden	James	.13									.18	.05	.70						.18		.07		.10							.51		.18	2.10		
Fort Yates	Missouri	.13	.21		.58	.10							1.00																				2.02		
Foxholm	Mouse	.15			.35						.43	.96	.56	.30								.06	T.	T.				.34		.21		.02	3.38		
Gackle	James	.93				.10								1.18				.30			.10									.92			3.53		
Garrison 3	Missouri	.61								.09	.01	.92							.08				.53						.46		T.		2.70		
Granville	Mouse	.18			.16						.10	2.80	.22	.55					.03		.15		T.						.03	.32			4.54		
Hansboro	Devils Lake	.25			.43				.23			4.51	.32	.08						T.			.15										5.97		
Linton	Missouri	.08	T.	.47	1.00									.92							T.								.07		.41	.06	3.01		
Maddock	Sheyenne	.11			.12								.06	.20					.05		.04			.32						.75			1.69		
Mandan 2	Missouri	.24	.19		.16	.13							.44	.41	.53				.07		.04			T.	.10	.03			.04	.30		.01	2.77		
Max 2	do	.19	.61		.04	.11													.18		.16		.12		.01				.65			T.	1.97		
McClusky	do	.42			.04									.58							.12		.01						.20	.10	.25	T.	4.04		
Minot Airport 3	Mouse	.72	.01		.04				.21	.04	1.11	.68							.01		.15		.01	T.				.20	.10	.25	T.	.51	1.94		
Mohall	do				.14					1.44	.89	.41	.17							.25		.03		.08	.08		T.	.55		.06			3.85		
Napoleon 2	Missouri	.13	.14			.45								.65				.07		.25								.21	.30	.07		T.	3.27		
New Salem	Heart	.36			.46	.01								.04	.55				.12	.04															

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

Vol. LII BISMARCK, N. D., AUGUST 1943 No. 8

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The weather was warm and moist. It was an excellent month for growing crops. Temperatures averaged slightly above normal but no unusually high or low readings occurred. The precipitation was light in the northeastern counties, excessive in the extreme southeastern counties, and moderate elsewhere. Considerable hail and some wind damage occurred in the southern and western counties. On August 30th a severe wind storm in northern Cass County destroyed much of the crop in that section. Six barns are known to have been destroyed and two horses were killed. Crops and pastures were generally very good at the close of the month. Harvesting and combining were making good progress.

TEMPERATURE

The mean temperature for the state was 67.7°, or 1.2° above the 1892-1943 average for August. The mean temperature for the eastern division was 68.1°; for the middle division, 67.7°; and for the western division, 67.4°. The highest mean temperature was 71.6° at New England, and the lowest, 63.2° at Hannah, making a range in mean temperature of 8.4°. The absolute range was 73°, from 104° at Mott on the 1st, to 31° at Parshall on the 17th. The average daily deficiency in temperature for the state since January 1, 1943, is 1.2°.

PRECIPITATION

The average precipitation for the state was 2.61 inches, or 0.56 inch more than the 1892-1943 average for August. In the eastern division the average amount was 2.60 inches; in the middle division, 2.52 inches; and in the western division, 2.71 inches. The greatest monthly amount reported was 6.81 inches at Fargo; the least was 0.49 inch at Devils Lake. The greatest amount recorded in any 24 consecutive hours was 4.72 inches at Fargo on the 8th. The accumulated excess in precipitation for the state since January 1, 1943, is 3.08 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.22	16	29.42	31	9.8	34	e.	1	77	86	55	50	73	31
Devils Lake....	30.23	17	29.45	31	7.6	29	s.	11	79	88	52	51	68	43
Fargo	30.20	17	29.34	31	10.6	33	n.w.	13	81	89	61	62	58	22
Williston.....	30.19	16	29.44	31	6.4	22	n.	31	67	81	47	41	84	29

† And other dates.

SILENT OBSERVERS

With deep regret we record their passing.

Mr. John H. Phelps of Crosby, North Dakota, died August 24, 1943 at the age of 69 years. To his community and to the Weather Bureau he left an invaluable gift of 11 years of continuous daily observations.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs		8	5	19		26	2		1	3	10						2						6	16	3	8	8	24	9	1	5
Lunar halos ..																															
Solar halos ..																															
Thunderstorms.	9	2	4	3	9	8		1		3	6	25	9	2	6	4		10	7	16	14	23	7	14	13	8	2	5	2	10	29
Hail	1										18	2	1					2		3	5							1			3

COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	67.3	105	24	2.86	2.80	1.50	2.39	0	8	15	10	6	
1893...	66.7	109	29	2.10	1.25	0.58	1.31	0	3	20	7	4	
1894...	68.8	102	30	1.37	0.86	1.20	1.14	0	4	17	10	4	
1895...	64.5	104	24	1.87	1.36	1.48	1.57	0	5	17	11	3	
1896...	64.7	107	21	2.07	0.86	0.42	1.12	0	5	17	10	4	
1897...	64.1	106	29	1.28	1.13	1.13	1.18	0	5	15	10	6	
1898...	65.4	104	24	2.92	1.40	0.75	1.69	0	5	15	11	5	
1899...	65.2	97	32	2.90	2.90	2.69	2.83	0	6	15	11	5	
1900...	70.4	114	33	6.05	4.53	4.60	5.06	0	10	14	11	6	
1901...	66.9	100	32	2.55	1.90	0.86	1.77	0	6	18	8	5	
1902...	64.3	96	26	2.65	2.36	1.88	2.30	0	8	16	9	6	
1903...	63.7	103	35	4.72	4.65	4.67	4.68	0	10	13	7	11	
1904...	63.3	102	31	1.56	1.92	1.34	1.61	0	6	17	7	7	
1905...	67.5	107	34	3.51	2.44	1.34	2.43	0	7	17	8	6	
1906...	66.3	105	31	1.53	1.74	2.25	1.84	0	7	17	6	8	
1907...	64.5	104	26	2.17	1.23	1.79	1.73	0	6	18	9	4	
1908...	63.2	104	25	2.48	2.46	1.55	2.16	0	7	17	8	6	
1909...	69.8	109	27	2.98	1.94	1.78	2.23	0	6	18	9	4	
1910...	63.1	109	24	1.58	1.30	1.51	1.46	0	5	14	8	9	
1911...	62.2	98	23	3.61	3.87	2.15	3.21	0	8	12	11	8	
1912...	63.4	118	32	3.41	2.60	2.62	2.88	0	10	11	10	10	
1913...	68.9	106	30	3.15	2.32	2.42	2.63	0	6	16	10	5	
1914...	64.2	101	26	2.00	2.26	2.61	2.29	0	7	13	11	7	
1915...	64.4	100	19	1.16	1.49	0.89	1.18	0	4	19	8	4	
1916...	66.0	100	26	3.17	2.79	2.05	2.67	0	8	16	10	5	
1917...	65.2	105	25	0.96	0.74	0.76	0.82	0	4	17	10	4	
1918...	66.5	102	34	3.51	3.39	3.25	3.38	0	8	15	11	5	
1919...	67.9	101	30	2.58	1.57	0.63	1.59	0	5	18	10	3	
1920...	68.8	108	28	1.03	2.01	1.55	1.53	0	5	22	6	3	
1921...	67.2	108	31	3.08	1.86	0.99	1.98	0	6	18	10	3	
1922...	69.8	115	33	1.29	1.63	1.02	1.31	0	6	18	9	4	
1923...	63.0	97	28	2.38	1.70	1.45	1.84	0	8	14	12	5	
1924...	63.8	102	28	2.27	1.36	1.09	1.57	0	6	17	9	5	
1925...	67.9	110	29	1.39	1.06	0.66	1.04	0	5	20	8	3	
1926...	65.6	105	36	3.01	2.41	1.68	2.37	0	7	14	8	9	
1927...	63.4	96	28	3.17	3.63	2.58	3.13	0	8	18	8	5	
1928...	64.8	105	25	3.84	3.15	2.28	3.09	0	8	17	9	5	
1929...	68.5	106	26	0.87	0.83	0.60	0.77	0	4	20	9	2	
1930...	70.4	104	32	1.40	1.45	1.49	1.45	0	6	15	9	7	
1931...	67.0	105	30	2.43	2.33	1.51	2.09	0	6	16	9	6	
1932...	68.3	100	28	2.40	1.37	1.89	1.89	0	7	16	10	5	
1933...	68.5	104	31	0.81	0.64	0.79	0.75	0	5	17	9	5	
1934...	67.4	108	25	1.70	1.15	0.60	1.15	0	5	16	11	4	
1935...	66.2	109	26	3.83	1.90	1.32	2.35	0	8	16	9	6	
1936...	69.8	110	29	1.67	1.37	1.16	1.40	0	6	14	11	6	
1937...	72.9	109	40	2.56	1.11	0.88	1.52	0	5	18	10	3	
1938...	69.8	109	33	1.79	1.22	1.48	1.50	0	6	18	10	3	
1939...	68.6	105	32	1.94	2.37	1.98	2.10	0	7	18	9	4	
1940...	67.8	103	33	3.12	1.77	1.25	2.05	0	7	18	7	6	
1941...	68.8	111	32	3.44	2.63	2.52	2.86	0	10	11	14	6	
1942...	66.3	105	33	4.69	2.48	2.10	3.09	0	9	12	12	7	
1943...	67.7	104	31	2.60	2.52	2.71	2.61	0	9	16	10	5	
Period	66.5	118	19	2.49	2.00	1.66	2.05	0	6	16	9	6	

Climatological Data for August 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton.....	Cass	961	47	70.4	+3.3	93	6	42	17	5.65	+3.06	2.55	31	0	13	24	6	1	sw.	C. Hayford.
Cavalier.....	Pembina	894	33	68.3		90	6†	46	16†	1.03	-1.33	0.36	23	0	8	16	10	5	n.	City Light & Power Co.
Colgate.....	Steele	1,180	10							3.15		0.84	21	0	9	14	16	1	s.	O. M. Jensen.
Cooperstown.....	Griggs	1,428	46	69.0	+1.6	93	6	40	17	2.06	-0.57	0.47	4	0	13	10	13	8	nw.	R. J. Lockner.
Courtenay.....	Stutsman	1,523	13							2.97	+0.84	1.12	22	0	13	17	9	5	e.	G. H. Hanawalt.
Devils Lake.....	Ramsey	1,478	46	67.0	+2.2	92	12	42	16	0.49	-1.99	0.20	11	0	6	11	13	7	s.	U. S. Weather Bureau.
Edgeley, 2 miles S.....	LaMoure	1,568	42	68.2	+0.5	99	1	38	17	2.47	0.00	1.13	25	0	10	15	12	4	e.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.....	Ramsey	1,524	19	64.7	-0.1	92	6	36	17	0.58	-1.72	0.31	11	0	4	21	7	3	s.	Mike Davis.
Ellendale.....	Dickey	1,457	48	68.6	-0.1	98	1	42	17	2.61	-0.11	0.82	25-26	0	12	13	9	9	s.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	16	69.6	+3.5	92	6	44	17	6.81	+3.92	4.72	8	0	14	10	13	8	s.	U. S. Weather Bureau.
Forman.....	Sargent	1,249	50	70.4	+2.2	96	1	45	16	2.18	-0.60	0.73	12	0	9	21	8	2	s.	Helge Dyste.
Fullerton.....	Dickey	1,439	45	68.3	+0.3	97	1	40	17	3.77	+1.24	0.93	11-12	0	12	10	15	6	s.	F. O. Alin.
Grafton.....	Walsh	827	51	69.4	+3.2	92	6	44	17	1.26	-1.32	0.39	8	0	7	13	13	5	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.....	Grand Forks	830	52	68.0	+2.0	93	6	40	17	1.07	-1.57	0.34	8	0	8	10	12	9	nw.	University of N. Dak.
Grand Forks Airt., 2½ mi. W	Grand Forks	833	3	68.0		93	6	40	17	1.77		0.53	31	0	12	12	12	7	nw.	U. S. Airway Comm. Sta.
Hankinson.....	Richland	1,068	14	68.8	-1.9	96	1	41	17	2.16	-0.33	0.79	25	0	11	6	22	3	se.	Soo Line Agent.
Hannah.....	Cavalier	1,568	51	63.2	-0.9	85	31	38	16	3.10	+0.98	1.90	31	0	5	12	8	11	nw.	A. E. Prior.
Hillsboro.....	Trall	901	43	69.0	+0.8	92	6	44	17	5.09	+2.39	1.17	31	0	16	15	9	7	ne.	Alfred Jahnke.
Jamestown, 2 miles SE.....	Stutsman	1,457	51	69.8	+2.9	96	1	41	17	3.03	+0.34	0.94	11	0	10	13	12	6	se.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE.....	Stutsman	1,494	3	67.4		94	1	38	17	3.06		1.00	11	0	15	12	15	4	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW.....	Stutsman	1,440	4	67.2		94	1	38	16†	2.37		0.68	26	0	11	16	12	3	se.	U. S. Wildlife R. fuge.
Langdon, 1 mile E.....	Cavalier	1,615	47	65.1	+1.4	90	6	38	17	2.97	+0.51	0.76	23	0	11	17	7	7	.....	V. Sturlaugson.
Larimore.....	Grand Forks	1,134	50	69.1	+3.2	94	6	41	17	0.76	-2.02	0.50	8	0	5	17	4	10	ne.	W. L. Goodson.
Lisbon.....	Ransom	1,091	39	68.2	+0.4	99	1	41	17	2.73	+0.05	0.82	25	0	13	13	3	15	nw.	J. O. Halverson.
Mayville.....	Trall	975	47	69.8	+1.9	92	6†	42	17	3.17	+0.54	1.07	1	0	10	17	6	8	s.	H. B. Addicott.
McHenry, 3 miles NE.....	Eddy	1,509	21	66.4	+0.7	90	6	38	17	1.53	-0.95	0.56	23	0	9	19	6	6	s.	C. E. Blasky.
McLeod, 3 miles E.....	Richland	1,075	32	69.1	+0.6	97	7	47	27	2.10	-0.32	0.64	8	0	10	15	14	2	sw.	J. G. Carlson.
McVile.....	Nelson	1,467	13							0.66		0.21	25	0	7	15	14	2	se.	A. M. Casad.
Milnor.....	Sargent	1,117	4	68.4		97	1	41	16	5.18	+2.60	1.74	28	0	10	19	8	4	ne.	E. W. Wilson.
Oakes.....	Dickey	1,318	14	67.4	-1.7	98	1	44	17	2.50	+0.10	0.83	11-12	0	8	12	1	18	nw.	F. H. Murray.
Park River.....	Walsh	998	39	67.9	+1.3	91	6	39	17	0.69	-1.73	0.30	23	0	3	21	8	2	nw.	E. J. Tantor.
Pembina, 2½ miles N.....	Pembina	789	69	65.8	+1.1	85	7	39	17	2.91	-0.72	0.75	8	0	9	8	21	2	se.	S. W. Douglas.
Pembina Airport, 1 mile S.....	Pembina	795	4	65.9	+1.2	88	21†	42	27	2.43	+0.24	0.65	8	0	11	9	12	10	s.	U. S. Airway Comm. Sta.
Petersburg.....	Nelson	1,520	13							1.08	-1.16	0.69	11	0	4	16	12	3	se.	T. M. R. Kiken.
Sharon.....	Steele	1,516	19	68.0	+0.1	92	6	43	16†	1.14	-1.30	0.28	26	0	12	13	13	5	sw.	Nels O. Grefshelm.
Valley City.....	Barnes	1,245	37	69.1	+1.4	91	6	41	17	3.06	+0.85	1.69	12	0	11	18	8	5	nw.	I. C. Robertson.
Wahpeton.....	Richland	962	51	70.4	+1.7	94	1	40	17	4.56	+1.88	1.67	8	0	17	12	10	9	se.	W. J. Cavanaugh.
Average for Eastern Division				68.1	+1.1	99	1	36	17	2.60	+0.11	4.72	8	0	10	14	11	6	nw.	
Middle Division																				
Ashley, 1 mile SE.....	McIntosh	2,014	47	66.6	-0.6	98	1	33	17	5.63	+3.08	3.20	31	0	13	9	12	10	se.	U. S. Airway Comm. Sta.
Boulah.....	Mercer	1,797	29							2.59	+0.68	0.94	11	0	8	22	6	3	nw.	Knife Rvr. Coal Mng. Co.
Bisbee.....	Towner	1,601	40	67.0	+1.3	96	6	40	16	3.71	+1.24	1.60	11	0	5	20	7	4	nw.	Robert L. Peterson.
Bismarck.....	Burleigh	1,670	69	70.3	+2.1	93	1†	44	16†	2.79	+1.01	1.06	11	0	9	14	11	6	se.	U. S. Weather Bureau.
Bismarck Airt., 2½ mi. SE.....	Burleigh	1,650	4	69.4	+2.7	93	1	43	17	2.72	+0.90	1.10	25	0	11	14	11	6	se.	U. S. Weather Bureau.
Bottineau.....	Bottineau	1,638	51	69.6	+4.7	95	9	37	16	3.77	+1.36	1.35	30-31	0	9	23	1	7	se.	N. D. School of Forestry
Butte, 3 miles WSW.....	McLean	1,880	17	66.4	-0.8	90	18	38	16	1.81	-0.12	0.67	31	0	8	17	6	8	nw.	R. L. Williams.
Carrington.....	Foster	1,579	45	68.4	+1.3	93	6†	40	16	1.32	-0.84	0.53	26	0	9	16	2	13	.....	Soo Line Agent.
Carson, 2½ miles SW.....	Grant	2,500	31	69.7	+1.1	100	6	39	16	2.99	+0.29	0.62	25	0	6	13	13	5	se.	J. W. Evans.
Center.....	Oliver	2,100	5	66.8		95	1	35	16†	3.32		1.05	11	0	10	11	17	3	nw.	Fred L. Thinz.
Drake.....	McHenry	1,634	14	68.5	+0.9	94	6†	40	16	1.33	-0.44	0.39	11	0	7	22	3	6	nw.	H. G. Krings.
Dunseith, 2 miles NNE.....	Rolette	1,682	47																	Geo. Gehrs.
Eckman.....	Bottineau	1,500	38	65.2	+0.2	88	30	36	16	3.88	+1.91	1.82	30-31	0	9	22	5	4	se.	E. R. Sherman.
Fessenden.....	Wells	1,610	31	68.0	+1.3	92	6†	40	16	1.24	-1.07	0.74	26	0	8	15	11	5	n.	John V. Zuber.
Fort Yates.....	Sioux	1,670	43	70.5	+0.8	101	1	35	17	2.82	+0.65	1.52	25	0	3	20	6	5	se.	P. J. Jacobson.
Foxholm, 6½ miles NE.....	Ward	1,657	22	66.2	-0.4	90	30	39	16	3.00	+0.89	1.61	30-31	0	9	14	12	5	sw.	E. C. Bierbaum.
Gackle.....	Logan	1,951	13	70.3		96	1	40	17							14	12	5	nw.	A. H. Haant.
Garrison.....	McLean	1,925	66	67.0	+0.4	93	6	40	16†	1.38	-0.63	0.51	25-26	0	6	16	13	2	e.	Mae H. Vorachek.
Granville.....	McHenry	1,504	36	67.2	+1.5	91	6†	41	16	2.17	+0.27	0.64	31	0	7	21	7	3	nw.	Fr-d Roble.
Hansboro.....	Towner	1,597	35	64.6	+1.1	88	12†	39	16	2.80	+0.50	1.19	31	0	6	17	10	4	sw.	W. E. Disher.
Harvey.....	Wells	1,596	40							1.15	-1.19	0.42	26	0	6	13	12	6	.....	Orville Hoksche.
Leeds.....	Benson	1,515	3	68.7		95	6	38	17	1.02		0.31	26	0	6	8	19	4	w.	John Dulmage.
Linton.....	Emmons	1,711	26	71.3	+1.2	100	1	36	17	2.36	-0.01	0.75	25	0	9	11	10	10	se.	Wm. Heyerman.
Maddock, 1 mile E.....	Benson	1,604	28	69.0	+2.5	95	6	38	16	0.74	-1.73	0.24	11	0	6	15	13	3	nw.	A. T. Felland.
Mandan, 1½ miles SW.....	Morton	1,750	29	69.1	+0.2	94	12	41	16†	3.21	+1.49	1.44	12	0	11	14	5	12	se.	No. Gt. Plains Field Sta.
Max.....	McLean	2,093	14	69.2	+1.8	92	6	38	16											

Climatological Data for August 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Alpha, 1 mile S.	Golden Valley	2,908	20	69.6	+1.2	98	1	41	16	2.20	+0.49	0.60	25-26	0	7	23	4	4	se.	H. A. Bury.
Amidon	Slope	2,759	37	68.0	+0.8	95	18	45	15	2.68	+1.31	0.82	25-26	0	6	21	7	3	sc.	A. M. Nesseth.
Beach	Golden Valley	1,958	14	63.8	-0.4	88	5†	38	16	1.42	-0.59	0.48	7	0	7	19	4	8	w.	Mrs. Belle Callahan.
Bowbells	Burke	2,872	28	68.6	+0.5	96	18	44	16	2.68	+0.88	1.21	25	0	10	18	2	11	se.	Charles Kautman.
Bowman	Bowman	1,954	34	65.0	0.0	98	30	41	16†	1.47	-0.52	0.65	8	0	6	16	10	5	w.	Oscar L. Erickson.
Crosby	Divide	2,543	50	67.2	+0.7	95	1	39	16	3.19	+1.20	1.55	25	0	7	19	6	6	nw.	George M. Phelps.
Dickinson, 1 mile NW	Stark	2,577	3	68.2	...	95	1†	41	16	2.50	...	1.21	25	0	10	8	16	7	se.	Leroy Moonaw.
Dickinson Airpt., 5† mi. S.	Stark	2,191	43	65.0	-1.4	93	1	37	16	3.99	+2.28	1.29	12†	0	9	15	13	3	se.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,082	49	67.0	-0.9	92	6	36	16	2.57	+0.65	1.44	25	0	7	15	14	2	nw.	O. T. Evenson.
Elbowoods	McLean	2,224	32	67.0	-0.5	94	18	42	16	2.07	+0.37	0.68	8	0	4	25	6	0	se.	H. W. Case.
Epping	Williams	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	T. Beachler.
Fairfield, 9† miles N	Billings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	24	67.8	...	93	1	39	16	3.42	+1.46	1.01	25	0	9	20	8	3	se.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	3	67.0	...	95	1†	37	16	2.81	...	1.37	25-26	0	8	14	12	5	se.	U. S. Airway Comm. Sta.
Grassy Butte, 8 miles NNW	McKenzie	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Fred Hartman.
Grenora	Williams	2,114	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	John S. Sorenson.
Halliday	Dunn	2,073	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	A. L. Gerhart.
Hettinger	Adams	2,475	35	71.2	+2.3	99	18	45	16	1.73	+0.10	1.10	24-25	0	4	21	10	0	nw.	A. W. Anderson.
Kenmare	Ward	1,799	11	66.8	-1.2	90	6	42	16	2.63	-0.69	1.55	8	0	8	20	3	8	nw.	Thero. E. Eckberg.
Marmarth	Slope	2,714	33	69.4	+1.2	97	18	44	16†	2.54	+0.80	0.82	26	0	10	17	8	6	se.	S. P. Grane.
Medora	Billings	2,271	27	69.6	...	99	18	43	16†	2.69	+1.04	1.80	25-26	0	6	23	6	2	ne.	Harry Roberts.
Mott	Hettinger	2,424	35	71.2	+3.2	104	1	39	16	2.51	+0.58	1.21	25	0	10	17	10	4	se.	P. G. Wick.
New England	Hettinger	2,400	48	71.6	+3.8	100	18	40	16	2.49	+0.79	0.93	25	0	9	15	11	5	se.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Peter F. Pieck.
Parshall	Montreuil	1,923	27	63.8	-2.2	92	6	31	17	2.88	-0.92	1.29	25-26	0	10	16	14	1	se.	C. E. Shubert.
Portal	Burke	1,954	37	64.3	-0.5	88	6†	40	15†	2.39	+0.50	1.34	7-8	0	8	22	1	8	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	37	65.1	-0.7	93	7	39	16	3.26	+1.49	1.32	22	0	8	16	10	5	w.	Geo. B. Gee.
Richardton, 1† miles N	Stark	2,467	26	68.4	-0.1	94	6	44	17	4.00	+2.65	1.54	25	0	7	13	14	4	se.	Assumption Abbey.
Sanish	Montreuil	1,835	17	61.8	-2.8	91	6†	36	16	4.12	+2.58	1.28	25-26	0	6	18	12	1	...	H. J. Bugge.
Stanley	Montreuil	2,258	5	66.0	...	88	6	42	4	1.60	...	0.51	25-26	0	6	18	10	3	w.	Leroy Edwards.
Tioga	Williams	2,279	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	R. V. Olson.
Trotters	Golden Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Walter Grunewald.
Van Hook	Montreuil	1,864	3	66.2	...	93	6	35	15	3.00	-0.60	1.02	30	0	6	20	9	2	nw.	V. L. Snyder.
Watford City	McKenzie	2,084	29	67.8	-0.5	95	18	39	16	3.96	+2.25	1.02	25-26	0	7	19	10	2	e.	J. C. Zeller.
Willrose	Williams	2,255	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Fred E. Maucher.
Williston	Williams	1,878	63	67.6	+1.5	94	18	44	16	2.01	+0.54	0.83	3	0	9	15	14	2	se.	U. S. Weather Bureau.
Average for Western Division				67.4	+0.4	104	1	31	17	2.71	+1.05	1.80	25-26	0	8	17	10	4	se.	
Average for the State				67.7	+1.2	104	1	31	17	2.61	+0.56	4.72	8	0	9	16	10	5	se.	

Daily Temperatures for August 1943

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum..	98	71	69	75	83	95	83	86	86	85	79	87	78	86	74	69	76	85	78	81	90	85	87	81	63	63	72	86	82	84	84	80.7
	Minimum.....	59	54	55	53	49	62	57	50	45	60	57	55	48	46	46	40	33	47	58	52	55	61	62	56	54	50	47	48	49	63	52	52.4
Bismarck Airport ¹ ..	Maximum.....	93	75	65	76	85	90	89	86	90	90	85	92	79	91	75	72	79	91	80	83	90	81	84	81	65	65	74	86	87	85	79	82.4
	Minimum.....	63	55	57	56	56	71	65	57	51	56	56	52	55	50	52	44	43	57	65	51	60	63	65	59	57	52	48	54	52	64	58	56.3
Bottineau.	Maximum.....	90	85	79	85	85	90	92	88	95	86	89	89	85	90	92	82	90	90	86	86	88	86	91	90	88	78	85	90	87	91	81	87.4
	Minimum.....	50	45	58	45	54	60	56	61	57	50	54	49	48	47	40	37	46	52	62	50	55	60	58	48	52	54	50	55	47	61	51	51.8
Carson	Maximum.....	99	79	70	80	88	100	90	93	93	94	85	95	81	93	77	76	88	92	97	82	92	83	84	80	66	62	77	88	85	86	80	85.0
	Minimum.....	65	54	54	53	54	60	56	48	47	59	59	53	50	54	51	39	44	58	66	51	57	62	58	54	54	54	46	51	50	62	62	54.4
Crosby \$	Maximum.....	77	75	69	81	85	88	88	76	80	81	81	80	76	79	72	76	85	92	77	83	80	76	81	76	62	75	81	83	89	98	75	79.9
	Minimum.....	55	48	50	49	51	57	59	55	50	52	51	49	53	51	49	41	42	50	55	41	45	46	46	49	48	50	50	56	59	50	50.2	
Devils Lake ¹	Maximum.....	81	76	68	77	81	89	85	85	82	85	87	92	75	88	71	70	75	86	84	80	88	75	84	79	62	67	74	86	84	86	74	79.8
	Minimum.....	58	50	57	56	54	63	57	60	55	66	59	55	53	50	49	42	43	48	63	48	58	57	58	55	51	55	49	56	52	59	58	54.3
Dickinson Airport ³ ..	Maximum.....	95	74	74	79	89	94	88	81	88	90	87	89	78	86	73	72	84	94	87	84	86	81	84	77	62	...	...	...	...	...	...
	Minimum.....	58	49	53	51	57	63	59	54	61	55	57	55	52	53	47	41	46	56	56	49	52	59	58	57	50	52	...	...	...	...	...
Dunn Center \$.	Maximum.....	93	78	63	77	87	90	86	81	87	89	80	86	77	86	73	72	83	89	84	82	84	80	82	78	62	69	77	84	86	88	78	81.0
	Minimum.....	53	50	50	52	51	58	51	53	43	43	50	49	51	48	48	37	38	43	48	44	45	48	55	54	53	52	47	48	47	57	55	49.1
Fargo Airport ¹	Maximum.....	89	74	77	75	83	92	84	90	88	86	83	86	79	84	76	71	77	83	79	83	86	80	87	81	72	66	69	79	84	84	89	81.3
	Minimum.....	62	53	55	59	54	66	65	65	57	63	66	63	58	51	56	51	44	51	63	58	58	62	60	62	55	54	49	56	55	60	65	57.2
Fessenden	Maximum.....	90	72	72	77	84	92	91	83	85	88	83	92	76	88	88	68	78	88	90	87	80	74	86	82	78	63	69	86	84	82	74	81.0
	Minimum.....	61	49	56	54	52	65	58	65	52	56	57	52	55	49	53	40	44	47	64	48	54	57	57	59	55	52	48	52	59	63	54.4	
Fullerton	Maximum.....	97	85	73	74	81	94	84	91	85	84	78	85	77	83	74	70	72	81	76	80	84	84	85	79	71	68	72	85	80	84	86	80.4
	Minimum.....	58	53	55	58	51	64	60	69	51	60	62	55	55	50	56	45	40	44	60	54	56	60	59	66	58	57	49	52	53	62	61	55.1
Garrison ³	Maximum.....	89	72	62	78	83	93	85	83	85	88	82	84	83	89	73	73	82	90	89	83	89	80	81	82	67	70	74	85	85	87	78	81.3
	Minimum.....	59	50	56	53	53	60	57	55	49	52	55	52	52	49	49	40	40	49	59	46	55	62	59	55	54	51	45	52	49	60	53	52.8
Golva ³	Maximum.....	95	76	67	81	90	91	87	82	88	90	84	89	81	87	74	76	88	95	83	89	89	85	84	81	65	73	84	83	86	85	74	82.7
	Minimum.....	59	46	54	49	56	59	53	47	45	52	51	54	48	50	43	37	45	56	50	41	44	58	61	52	54	53	49	47	47	58	47	50.0
Grafton	Maximum.....	91	89	78	79	80	92	89	85	86	86	87	89	89	85	86	74	76	83	82	82	86	84	81	80	77	70	76	90	88	86	85	83.5
	Minimum.....	61	51	56	56	54	65	60	64	56	55	62	55	54	48	55	48	45	59	58	55	56	54	60	52	56	46	55	53	52	66	55.6	
Grand Forks Airport ³	Maximum.....	85	75	74	77	83	93	83	80	85	85	85	89	77	84	70	71	76	84	80	87	88	74	86	86	69	71	76	85	90	85	86	81.5
	Minimum.....	56	51	54	57	53	66	55	60	55	55	60	60	54	49	51	45	40	44	59	57	58	58	57	57	54	54	48	55	54	56	65	54.5
Jamestown Airport ³	Maximum.....	94	74	72	77	81	93	86	87	87	87	85	92	78	86	75	71	75	86	78	83	90	76	88	82	63	67	74	88	84	82	84	81.1
	Minimum.....	59	50	55	56	48	64	61	55	50	54	57	53	50	45	50	42	38	46	57	55	55	58	59	59	55	51	44	52	51	60	61	53.3
Kenmare ³	Maximum.....	79	75	61	80	82	90	81	78	82	85	82	85	76	83	74	71	80	85	83	80	84	75	80	79	63	75	78	85	85	88	75	79.9
	Minimum.....	61	51	57	50	55	61	59	61	53	55	59	53	56	52	53	42	47	57	60	45	56	52	54	50	52	54	52	59	51	58	60	54.0
Langdon	Maximum.....	73	78	72	76	79	90	84	82	84	85	87	88	80	84	80	71	74	84	85	82	87	72	77	77	67	68	73	85	85	84	78	79.9
	Minimum.....	57	42	52	42	51	63	53	57	51	48	52	51	50	45	50	39	38	50	57	45	52	52	50	53	46	53	43	54	51	56	62	50.1
Marmarth	Maximum.....	95	73	68	80	89	91	88	82	87	88	88	86	86	86	89	81	88	97	88	88	89	86	87	83	73	71	87	86	87	87	83	85.5
	Minimum.....	63	53	53	51	59	60	62	60	46	51	57	50	46	50	51	44	51	64	54	55	61	50	50	56	55	51	50	51	59	59	59	53.3
Minot Airport ³	Maximum.....	79	75	63	80	82	89	82	80	80	86	87	86	75	85	72	72	79	89	84	80	83	79	79	76	65	70	75	83	85	89	75	79.9
	Minimum.....	56	50	56	53	53	61	58	58	52	53	57	57	55	50	48	40	43	54	56	45	58	53	55	52	51	55	51	59	54	59	52	53.3
Mott	Maximum.....	104	96	80	83	100	95	91	92	92	93	82	94	78	79	86	98	92	85	88	82	80	76	71	69	79	87	87	87	87	87	82	87.7
	Minimum.....	65	56	55	52	48	67	63	54	45	56	66	50	60	55	52	39	40	52	70	51	55	60	58	61	56	55	48	50	49	63	64	55.5
Pembina Airport ³ ..	Maximum.....	75	77	77	77	81	87	85	84	81	84	87	87	76	84	66	71	77	85	84	80	88	78	79	76	65	71	77	84	88	86	81	79.1
	Minimum.....	52	48	55	54	48	59	58	60	57	52	58	52	62	48	44	43	47	59	53	46	44	51	55	50	54	42	56	54	54	57	51.1	
Sharon	Maximum.....	86	80	71	79	81	92	86	87	87	89	85	89	75	85	73	71	76	83	76	83	86	73	86	84	67	65	73	85	85	82	83	80.4
	Minimum.....	63	50	53	54	54	62	60	64	52	59	57	56	52	47	53	43	53	62	56	56	56	57	63	52	55	70	54	60	55	62	55.5	
Steele	Maximum.....	91	79	68	73	81	92	86	83	86	85	82	87	77	85	74	68	74	87	82	80	87	85	87	78	74	62	71	83	85	84	80	80.4
	Minimum.....	58	53	54	53	30	65	60	65	47	57	51	50	51	48	50	41	53	51	62	50	50	60	60	63	54	49	44	53	49	61	60	54.0
Valley City	Maximum.....	90	87	73	77	79	91	88	87	87	85	83	87	85	84	80	74	73	84	83	83	86	85	84	83	77	66	72	83	82	80	84	82.6
	Minimum.....	63	53	51	53	52	65	64	69	50	58	63	60	56	49	55	46	41	44	60	59	53	61	59	65	58	51	53	51	56	63	56.6	
Wahpeton																																	

Daily Precipitation for August 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Casselton	Red.	.03					.16		1.30				.50			.02					.17	.22	.03	.47		.07		.02		.11			2.55	5.65	
Courierstown	Sheyenne	.06		.09	.47				.10		.03		.16								.12		.13	.05		.09	.40		.24			.12	2.96		
Courtney	James	.09		.02	.18				.02			.11	.28							.27		.10	.07	1.12	.02	.09	.60						2.07		
Devils Lake 1 ^f	Devils Lake	T.		.13					.02			.20											T.	T.			.21					T.	.01	0.49	
Edgeley	James		T.	.11			.17					.08	.68		T.								.08		.13	.92	.11						.04	2.47	
Edmore	Devils Lake					T.						.31											T.	T.		T.	.18		.06		.03	.08	0.53		
Ellendale	James			.09			.41					.24	.15	.44								.09		.27	.41	.01	.03						.26	2.61	
Fargo 1 ^f	Red.	.03	T.	.05		.19		4.72		T.	.49	.05			.02				.26	.03	.02	T.	.27		.08	.08	T.			T.	.03	.52	6.81		
Forman	Sheyenne		.30	T.					.29	.13	.73											.08	T.		.17	.34	.09						2.18		
Fullerton	James		T.	.10		.66		.02	.07	.26	.67									T.		.06		T.	.71	.48	.40			.05		.02	.32	3.77	
Grafton	Red.		T.	.20		.21		.39		.06	.30												T.	.05	T.		.05				T.		1.26		
Grand Forks Airport 3	do	T.		.08	.03	.16	.03		.39		.01	.25				T.	T.				T.		.05	.01	.14	T.	.09			T.		.53	1.77		
Hankinson 2	do		.25					.36		.14	.16														.06	.79	.13	.06		.01			1.90		
Hillsboro	Pembina			.10		T.		.60			.15			T.							.07	.50	.02	.90		.33	.05	.59					3.10		
Jamestown Airport 3	James	.25		.17		.24	.03	.29		.03			.26										.02	.90		.33	.05	.59					1.17		
Langdon	Pembina	.14		.10	.08		.04		.19		1.00	.02			T.					.23	.01		.02	.51	.43	.25	.11				.10	.02	5.05		
Larimore	Red.			T.	.10	.01		.50			.75	.10											.02	.10		.11							3.06		
Lisbon	Sheyenne											.03	T.									.03	.12	.04	T.	.82	.46	.02		.27			.07		
Mayville	Red.	1.07		.21		.05		.48		.01			.20	.25		.08						.12	.11		.15	.15	.56	.59		T.	.27		2.73		
McHenry	James			.08	.03				.13	.32		.16											.05		.56	.05	.43						3.17		
McLeod	Sheyenne			T.				.64		.06	T.	.20	.02		.10						T.		.04	.32		.20		.08	.55		.18		1.53		
Oakes 2	James		.10					.77		.08		.25	.83										.06		.30		T.						.03	2.50	
Park River	Red.			.14				T.			.08														.07	.30		T.					.06	0.69	
Pembina Airport 3	do			.09		.05	.28		.65		.01	.14								T.					T.		.06		.44		.25		2.43		
Petersburg	do			.05					.22			.69												T.			.12						1.08		
Sharon	do			.06	.20				.04			.12	.09									T.	.02	.03		.06	.28		T.				.06	1.14	
Valley City	Sheyenne	.11		.01										1.09							.07		.02	.15		.57	.09	.15		T.			.06	1.06	
Wahpeton	Red.		.02	.05	.27			.03	1.67	1.07	.04	.02	.46	.06		.02						T.	.03	T.	.27	.04	T.	.26	.05		.20		.07	4.56	
Middle Division																																			
Ashley 3	Missouri		T.	.02	T.			.33	.05	.01	.14	.55	.09		T.							.10	T.			.01	.63	.40			.10	3.20	5.63		
Bisbee	Devils Lake			.09	T.	T.			.35			.16														.08						.10	3.20		
Bismarck 1 ^f	Missouri	.14	T.	.22	T.	T.	.15	T.	.02		T.	.67		T.	T.					T.	.01	T.	T.	.04	T.	.14	1.10	.03				T.	1.39	3.71	
Bottineau 2	Mouse				.20	.17			1.10					.01										T.	.18	.48		.23	.03				T.	.20	2.72
Butte	do		.02	.06	.17			T.	.06			.40											T.	T.		.20	.23		.03				1.35	3.77	
Carrington 2	James	.03		.18					.06	.19			.20							.09		.02		T.		.04	.04	.53					.67	1.81	
Carson	Heart			.14								.55											T.		.16	.62		.04	.47			T.	.15	2.09	
Center	Missouri			.16	.05				.07			1.05									.20	.29		.09		.05	.84	.52						3.32	
Drake 2	Mouse			.03	.35				.14				.39														.37	.01				.04	1.33		
Dunseith	do																																		
Eckman	do			.21				1.11				.02												.33			.02	.30	.05	.02			1.82	3.88	
Fessenden	James	.02		.13				.30				.14								T.	.10	.05				.16	.34					T.	1.24		
Fort Yates	Missouri											.78														1.52						.52	2.82		
Foxholm	Mouse		T.	.22	.01				.44			.12										T.		.19		.12	.27	.02					1.61	3.00	
Gackle	James																																		
Garrison 3	Missouri			.35					.07			.33												.03		.38	.22						T.	1.38	
Granville	Mouse			.13					.17			.63												.06		.29	.25						.64	2.17	
Hansboro	Devils Lake			.08		T.			.86		.04												.05	.58									1.19	2.80	
Linton	Missouri			.12			T.		T.		.05	.40	.14							T.						.03	.75	.63			.19	.05	2.36		
Maddock	Sheyenne	T.		.08	T.				.10			.24										.06	T.			.16	.10					T.	.07	0.74	
Mandan 2	Missouri	.01		.02	.05			.11	.22				1.44							T.	T.	T.	.02	T.	.11	.56	.63	.04				T.	3.21		
Max 2	do	.08	.10					.07					.40									T.	T.	T.		.15	.30	.02					1.00	2.12	
McClusky	do	.06		.22					.13										T.							.58	.30						1.29		
Minot Airport 3	Mouse			.21				T.	.13			.8							T.			.02	T.	.07		.38	.49	T.				T.	1.30	3.48	
Mohall	do			.34					.98			T.												.08		.01			.05	.23			.79	2.48	
Napoleon 2	Missouri			.15					.03			.28				.05										.08	.33	.52			.19	.70	2.33		
New Salem	Heart			.06			.11		T.			1.00											.05	.10		.13	1.18	.57	T.			T.	.02	3.22	
Pettibone	James			.08					T.			.20										.56	.39		.06	.25	.49						2.03		
Rolla	Devils Lake	T.	T.	.08	.10	T.			.58	T.		.09	.01										.12	.70		T.	.06			T.			1.75	3.49	
Rugby	Mouse			T.	.10				.05			.50															.43						1.40	2.48	
Ryder 2	Missouri				.35							.31								T.		.20	T.			.52	.54				.86		2.78		
Selfridge	do		.05					.05				.40	.55									.10				1.35					.30		2.30		
Steele	do	T.		.14								1.19	.12		.04							.05		.05	.03		.05	.24					2.50		
Tagus	Mouse	T.	T.	.22				.10				.12													.50		.13	.34					2.12	3.53	
Towner	do			.18				.22				.51												.09		.06	.32						.96	3.34	
Turtle Lake	Missouri	.06		.16	.02	.05		.02	.08			.28								.02			.68		.10	.05	.14	.40	.27			T.	1.44		
Tuttle	do	.07		.12	.06							1.11										.55		.10		.25	.49						.01	2.95	
Underwood	do	.13	T.	.36	T.	T.			.18			.38								T.			.10	T.		T.		.15				T.	1.30		
Velva	Mouse			.17					.04			1.22																							

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹ First-order Weather Bureau station; data are for the 24-hour period, midnight to midnight. ² Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ³ Data for 24 hours ending 12:30 a. m. C.S.T. ⁴ Precipitation measured with recording gage. ⁵ Precipitation included in the next following measurement. T. Trace, or precipitation less than 0.01 inch. [WBO, Minneapolis, 9-28-43-1050]

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LII

BISMARCK, N. D., SEPTEMBER 1943

No. 9

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GENERAL SUMMARY

September was cool and dry. Temperatures from the 9th to the 11th and from the 16th to the 25th were considerably below normal and killing frosts occurred at many stations. The frosts from the 9th to the 11th being somewhat earlier than the average date caused considerable damage to corn, melons, and gardens. This was the driest September since 1935 and the fourth driest since state-wide records began in 1892. Very little precipitation occurred after the 15th. There was no snowfall and no severe storms were reported. The weather was excellent for harvesting and threshing and by the close of the month threshing was nearly completed in the southern part of the state and more than half completed in the northern part. Yields were mostly excellent. Pastures were very dry by the close of the month, but livestock was in good condition.

TEMPERATURE

The mean temperature for the state was 55.6°, or 1.2° below the 1892-1943 average for September. The mean temperature for the eastern division was 55.5°; for the middle division, 55.7°; and for the western division, 55.7°. The highest mean temperature was 58.7° at Fort Yates, and the lowest, 52.3° at Parshall, making a range in mean temperature of 6.4°. The absolute range was 75°, from 94° at Crosby on the 27th, to 19° at Edmore on the 23d. The average daily deficiency in temperature for the state since January 1, 1943, is 1.2°.

PRECIPITATION

The average precipitation for the state was 0.51 inch, or 1.03 inches less than the 1892-1943 average for September. In the eastern division the average amount was 0.84 inch; in the middle division, 0.37 inch; and in the western division, 0.33 inch. The greatest monthly amount reported was 1.78 inches at McLeod; the least was 0.04 inch at Dickinson Airport and New Salem. The greatest amount recorded in any 24 consecutive hours was 1.70 inches at Mayville on the 1st. The accumulated excess in precipitation for the state since January 1, 1943, is 2.05 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs			6		3	1				8	1	23	5		1	2			1				5				1	2	1	2	
Lunar halos													1	1																	
Solar halos										2																					
Thunderstms.	5	7	2	1	1					8	1							1	3								3				
Sleet																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.46	16	29.46	18	10.9	36	nw.	7	72	81	44	43	76	250
Devils Lake	30.47	16	29.42	18	9.3	34	nw.	7	75	84	44	46	71	311
Fargo	30.43	16	29.52	18	13.6	44	w.	7	80	86	51	56	55	287
Williston	30.45	16	29.42	18	7.1	28	nw.	7	67	78	45	41	78	262

† And other dates.

COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892	59.2	101	24	1.08	1.05	0.40	0.84	0	4	16	7	7	7
1893	57.1	102	8	0.75	0.75	0.94	0.81	0.1	4	18	7	7	5
1894	58.2	104	18	1.06	1.67	1.42	1.38	0	5	15	7	7	8
1895	56.6	100	12	1.29	0.61	0.42	0.77	0	4	12	12	6	6
1896	53.0	98	11	2.25	2.00	0.57	1.61	0	6	12	12	10	10
1897	54.1	109	18	0.24	0.25	0.35	0.28	0	2	20	12	7	7
1898	56.8	98	10	1.85	1.00	0.90	1.25	0	4	14	12	7	7
1899	55.0	101	11	0.60	0.57	0.57	0.58	T.	3	17	12	4	4
1900	54.6	98	17	5.15	5.26	4.44	4.95	T.	7	12	11	11	11
1901	53.6	100	12	2.41	1.80	1.82	2.01	T.	7	10	8	12	12
1902	53.6	95	15	1.24	0.54	0.44	0.74	0	4	16	8	6	6
1903	51.6	90	18	3.36	2.85	2.77	2.99	0.7	7	12	6	12	12
1904	54.7	96	18	2.12	1.18	1.00	1.43	0	5	14	7	9	9
1905	59.8	104	23	1.62	1.65	1.74	1.67	0	5	16	8	6	6
1906	62.8	109	20	1.54	0.73	1.07	1.11	0	4	19	6	5	5
1907	52.1	96	9	2.39	1.11	0.68	1.39	T.	6	14	8	8	8
1908	60.7	104	16	0.87	0.89	1.97	1.24	0.2	4	17	7	6	6
1909	59.0	93	24	1.03	0.77	1.04	0.95	0	4	16	8	6	6
1910	55.3	99	18	2.38	1.88	1.10	1.79	0.1	4	14	7	9	9
1911	54.9	95	21	2.32	2.41	2.38	2.37	T.	8	12	8	10	10
1912	51.5	101	18	3.54	2.50	1.82	2.62	0	10	11	6	13	13
1913	57.2	108	8	2.39	1.47	1.37	1.74	0.4	6	16	8	6	6
1914	59.3	98	25	1.21	1.00	0.84	1.03	0	5	16	8	6	6
1915	54.6	104	23	2.42	2.60	1.94	2.32	0	9	10	8	12	12
1916	55.1	99	15	2.12	1.07	1.10	1.43	T	6	14	9	7	7
1917	56.4	97	16	1.53	0.93	0.65	1.04	0	5	12	9	9	9
1918	51.9	93	11	0.46	0.40	0.33	0.40	T.	3	15	9	6	6
1919	58.6	100	20	0.92	1.05	0.86	0.94	0.3	5	12	10	8	8
1920	59.0	99	19	3.94	1.19	1.49	2.21	T.	8	15	9	6	6
1921	57.0	101	25	3.91	3.37	2.34	3.21	T.	12	12	10	8	8
1922	59.8	104	23	2.42	2.00	1.89	2.10	0	6	16	8	6	6
1923	60.1	99	15	2.04	2.25	3.25	2.51	0	6	14	8	8	8
1924	55.0	98	20	3.68	1.91	0.68	2.09	T.	7	15	7	8	8
1925	58.1	103	20	4.18	2.23	1.61	2.67	T.	8	12	8	10	10
1926	52.3	95	9	2.80	2.44	1.66	2.30	0.5	9	11	9	10	10
1927	56.8	101	10	1.06	0.47	1.48	1.00	T.	3	16	9	5	5
1928	53.9	95	12	1.50	0.75	0.74	1.00	T.	5	17	7	6	6
1929	52.7	105	12	1.65	1.82	1.47	1.65	0	5	11	9	10	10
1930	56.2	98	10	1.02	0.88	1.17	1.02	0	4	16	9	5	5
1931	61.4	107	27	1.97	2.38	2.06	2.14	T.	6	18	7	5	5
1932	56.8	102	22	1.10	0.56	0.23	0.63	0	3	18	8	4	4
1933	60.9	101	22	1.03	0.71	0.70	0.81	0	4	16	8	6	6
1934	52.4	95	9	1.28	0.86	0.74	0.96	2.0	7	11	9	10	10
1935	57.2	105	16	0.73	0.44	0.12	0.43	0	3	15	9	6	6
1936	60.3	102	12	1.47	1.29	0.68	1.15	T.	5	15	10	5	5
1937	58.6	104	20	1.21	1.60	1.61	1.47	0.1	6	13	9	8	8
1938	61.9	99	21	0.95	0.34	0.61	0.63	0	4	17	7	6	6
1939	58.9	98	11	1.12	0.47	0.45	0.68	0.2	5	15	8	7	7
1940	62.8	103	20	0.87	0.98	1.32	1.06	0	4	17	9	4	4
1941	55.3	94	17	5.22	4.71	3.91	4.61	0.2	11	9	10	11	11
1942	54.0	99	4	1.71	1.62	1.67	1.67	2.7	9	12	9	9	9
1943	55.6	94	19	0.84	0.37	0.33	0.51	0	4	17	9	4	4
Period	56.8	109	4	1.88	1.45	1.29	1.54	0.1	6	14	8	8	8

Climatological Data for September 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Casselton	Cass	961	47	57.2	-0.7	84	2†	27	25	0.54	-1.58	0.42	11	0	3	21	7	2	nw.	C. Hayford.
Cavalier	Pembina	894	33	55.0	.....	86	29	29	20†	0.67	-1.59	0.21	7	0	5	11	9	10	nw.	City Light & Power Co.
Colgate	Steele	1,180	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	7	0	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	46	56.2	-1.5	86	29	28	10	0.73	-1.09	0.38	12	0	4	17	7	6	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	13	.....	.....	.....	.....	.....	.....	0.42	-0.94	0.42	11	0	1	21	8	1	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	55.0	-0.9	85	28	28	10	0.31	-1.32	0.15	11	0	5	11	11	8	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	42	54.9	-3.4	86	26†	25	11	1.60	-0.19	1.32	1	0	7	19	9	2	s.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	19	52.4	-4.0	84	28†	19	23	0.35	-1.45	0.15	2†	0	4	15	9	6	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	56.8	-2.0	87	27	27	25	0.60	-1.16	0.26	1	0	5	14	10	6	s.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	16	55.9	-2.3	83	29	29	20	0.79	-1.43	0.47	11-12	0	8	10	10	10	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	50	58.0	-1.5	84	27	32	10	0.68	-1.49	0.32	3	0	7	23	6	1	nw.	Helge Dyste.
Fullerton	Dickey	1,439	45	56.0	-2.0	84	27	29	10	0.85	-1.25	0.52	1	0	7	15	11	4	nw.	F. O. Alin.
Grafton	Walsh	827	51	55.0	-2.0	85	29	27	25	1.00	-1.34	0.76	1	0	3	14	9	7	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	52	55.2	-1.7	84	29	27	25	0.83	-1.21	0.60	1	0	5	8	20	2	nw.	University of N. Dak.
Grand Forks Aprt., 2½ mi. W	Grand Forks	833	3	55.8	.....	85	29	28	25	0.15	.....	0.07	7	0	3	8	15	7	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	55.3	-5.2	86	27	30	20†	1.29	-0.84	0.67	12	0	7	13	10	7	w.	Soo Line Agent.
Hannah	Cavalier	1,568	51	52.6	-2.2	85	29	26	23	1.05	-1.15	0.35	2	0	5	11	15	4	nw.	A. E. Prior.
Hillsboro	Trail	901	43	55.8	-3.2	83	29	27	17†	0.35	-1.00	0.20	11	0	4	11	11	8	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	51	57.0	0.0	88	26	27	20	0.27	-1.57	0.18	11	0	2	17	10	3	nw.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,491	3	55.3	.....	86	26†	25	10†	0.23	.....	0.11	7	0	4	11	13	6	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	4	55.3	.....	83	18†	25	23	0.20	.....	0.20	11	0	1	16	9	5	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	47	54.0	-0.5	84	26†	27	23	0.78	-1.54	0.27	1-2	0	10	12	11	7	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	50	55.9	-0.5	85	26†	28	23†	1.57	-0.69	1.25	1	0	3	15	6	9	nw.	W. L. Goodison.
Lisbon	Ransom	1,091	39	55.0	-3.1	84	2†	25	25	1.62	-0.52	0.95	1	0	7	11	3	16	nw.	J. O. Halverson.
Mayville	Trail	975	47	57.6	-0.9	86	1	26	25	1.70	-0.49	1.70	1	0	1	14	11	5	n.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	21	54.3	-1.5	83	26†	24	10	1.09	-0.42	0.58	11	0	8	17	8	5	n.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	32	58.2	-1.4	89	2	27	25	1.78	-0.43	0.69	1	0	5	20	7	3	nw.	J. G. Carlson.
McVie	Nelson	1,467	13	.....	.....	.....	.....	.....	.....	0.50	.....	0.29	1	0	2	14	12	4	nw.	A. M. Casad.
Milnor	Sargent	1,117	4	53.8	.....	85	28	29	25†	1.27	-0.92	0.55	12	0	4	27	3	0	nw.	E. W. Wilson.
Oakes	Dickey	1,318	14	54.8	-4.2	87	27	28	25	0.65	-0.54	0.40	1	0	5	19	2	9	nw.	F. H. Murray.
Park River	Walsh	998	39	55.8	-1.1	86	29	28	23	1.03	-1.21	0.79	1	0	3	19	8	3	nw.	Martin Severson.
Pembina, 2½ miles N	Pembina	789	69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. W. Douglas.
Pembina Airport, 1 mile S.	Pembina	795	4	53.2	-1.3	85	29	27	23†	0.73	-1.49	0.26	2	0	7	5	16	9	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	13	.....	.....	.....	.....	.....	.....	1.29	-0.14	1.05	1	0	3	17	12	1	se.	T. M. Rykken.
Sharon	Steele	1,516	19	55.7	-1.7	84	29	30	25	0.12	-2.06	0.05	7-8	0	5	12	11	7	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,245	37	56.9	-1.9	83	29	27	20†	0.37	-1.51	0.10	11	0	6	16	8	6	nw.	I. C. Robertson.
Wahpeton	Richland	962	51	58.0	-2.0	89	1	30	10	1.18	-1.20	0.57	11-12	0	11	9	12	9	nw.	W. J. Cavanaugh.
Average for Eastern Division				55.5	-2.1	89	1†	19	23	0.84	-1.04	1.70	1	0	5	15	10	5	nw.	
Middle Division																				
Ashley, 1 mi. SE	McIntosh	2,014	47	54.6	-3.3	86	27	23	10	0.33	-1.27	0.20	3	0	4	9	10	11	nw.	U. S. Airway Comm. Sta.
Bulah	Mercer	1,797	29	.....	.....	.....	.....	.....	.....	0.34	-1.28	0.12	7	0	4	19	6	5	nw.	Knife Rvr. Coal Mng. Co.
Bisbee	Towner	1,691	40	56.0	-0.7	89	29	25	23	0.20	-1.55	0.15	2	0	2	12	7	11	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	58.0	-0.1	89	26	28	10	0.19	-1.29	0.10	7-8	0	4	14	9	7	nw.	U. S. Weather Bureau.
Bismarck Airt., 2½ mi. SE	Burleigh	1,650	4	57.4	+0.1	89	26	27	10	0.23	-1.00	0.10	7-8	0	5	14	9	7	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,618	51	55.4	-0.1	88	28	29	22	0.75	-0.88	0.54	7	0	4	28	0	2	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	17	55.9	-1.6	85	29	28	10	0.75	-1.29	0.12	7	0	5	16	6	8	nw.	R. L. Williams.
Carrington	Foster	1,579	45	54.2	-2.7	86	26	26	10	0.10	-1.31	0.07	7	0	3	13	13	4	nw.	Soo Line Agent.
Carson, 2½ miles SW	Grant	2,500	31	57.7	-0.4	93	26	28	19	0.41	-1.19	0.14	2	0	4	19	10	1	nw.	J. W. Evans.
Center	Oliver	2,100	5	54.5	.....	88	26	25	10†	0.48	.....	0.20	6-7	0	4	14	13	3	nw.	Fred L. Hinz.
Drake	McHenry	1,634	14	55.8	-1.8	86	13†	30	10	0.31	-0.50	0.13	8	0	6	17	2	11	w.	H. G. Kring.
Dunseith, 2 miles NNE	Rolette	1,682	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hubert Downs.
Eckman	Bottineau	1,500	38	53.6	-2.1	85	26†	25	23	0.33	-1.13	0.12	7-8	0	5	15	8	7	nw.	E. R. Sherman.
Fessenden	Wells	1,610	31	55.8	-0.8	85	28†	28	10†	0.45	-1.19	0.25	11	0	3	14	10	6	n.	John V. Zuber.
Fort Yates	Sioux	1,670	43	58.7	-1.5	90	27	27	10	0.15	-1.37	0.15	3	0	1	19	8	3	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	22	55.8	-0.4	86	28†	30	10	0.33	-1.28	0.16	11	0	6	12	9	9	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. H. Haut.
Garrison	McLean	1,125	66	55.8	-0.1	89	26	28	10	0.46	-1.09	0.30	6-7	0	6	13	10	2	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	36	55.5	-0.4	89	29	28	23	0.09	-1.52	0.06	7	0	3	19	7	4	nw.	Fred Roble.
Hansboro	Towner	1,597	35	52.7	-1.5	86	28†	26	23	0.52	-1.46	0.34	2	0	5	15	7	8	nw.	W. E. Dishor.
Harvey	Wells	1,596	40	.....	.....	.....	.....	.....	.....	0.18	-1.37	0.12	7-8	0	4	12	14	4	nw.	Orville Holsch.
Leeds	Benson	1,515	3	55.8	.....	87	29	24	10	0.16	.....	0.08	2†	0	2	11	14	5	nw.	John Dulmage.
Linton	Emmons	1,711	26	57.8	-2.0	91	27	26	23	0.44	-1.16	0.15	1†	0	5	16	10	4	nw.	Wm. Heyerman.
Maddock, 1 mile E ††	Benson	1,604	28	56.8	-1.1	88	28	21	10	0.50	-1.31	0.22	11	0	5	13	14	3	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	29	57.3	-1.3	88	13	28	10	0.16	-1.33	0.15	16	0	2	16	6	8	sw.	No. Gt. Plains Field Sta.
Max	McLean	2,093	14	54.4	-2.2	87														

Climatological Data for September 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Alpha, 1 mile S.	Golden Valley	2,908	16	58.3	-0.1	89	17	30	19	0.15	-1.12	0.08	3	0	3	19	7	4	nw.	H. A. Bury.
Amidon	Slope	2,759	37	56.8	-0.6	89	17	28	19	0.19	-1.36	0.08	8	0	3	24	5	1	nw.	A. M. Nesseth.
Beach	Golden Valley	2,872	14	52.4	-1.2	85	26	21	10	0.45	-0.89	0.16	7	0	5	14	14	2	w.	Mrs. Belle Callahan.
Bowbells	Burke	2,872	28	55.9	-1.9	90	26	27	20	0.05	-1.23	0.05	2	0	1	21	6	3	nw.	Charles Kauffman.
Bowman	Bowman	2,872	34	54.7	-0.1	94	27	27	16	0.39	-1.00	0.22	6	0	7	17	10	7	n.	Oscar L. Erickson.
Crosby	Divide	2,543	50	54.2	-2.2	89	17	24	24	0.20	-1.12	0.08	8	0	4	18	9	3	nw.	George M. Phelps.
Dickinson, 1 mile NW	Stark	2,577	3	56.8	-2.9	89	26	31	19	0.04	-0.80	0.26	8	0	2	10	17	3	w.	Leroy Moonaw.
Dickinson Airpt., 5 1/4 mi. S.	Stark	2,191	43	53.6	-1.7	88	24	26	16	0.51	-1.08	0.19	7	0	4	18	9	3	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,082	49	55.8	-0.3	88	17	24	19	0.37	-1.02	0.13	2	0	4	19	8	3	nw.	O. T. Evenson.
Elbowoods	McLean	2,224	32	56.4	-0.3	88	17	24	19	0.37	-1.02	0.13	2	0	4	19	8	3	nw.	H. W. Case.
Epping	Williams	2,224	6	58.4	-0.1	89	13	32	9	0.26	-1.14	0.26	3	0	1	23	7	0	nw.	T. Beachler.
Fairfield, 9 1/4 miles N.	Billings	2,790	24	58.4	-0.1	89	13	32	9	0.26	-1.14	0.26	3	0	1	23	7	0	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,781	3	54.4	-2.6	85	26	32	19	0.22	-1.39	0.06	2	0	7	19	3	8	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,114	34	56.2	+0.9	90	17	26	19	0.10	-0.98	0.13	7	0	3	15	12	3	nw.	U. S. Airway Comm. Sta.
Grenora	Williams	2,073	3	58.5	-0.1	89	13	32	9	0.26	-1.14	0.26	3	0	1	23	7	0	nw.	John S. Sorenson.
Halliday	Dunn	2,675	35	55.2	-0.2	90	17	26	9	0.14	-1.15	0.08	2	0	2	17	4	9	nw.	A. L. Gerhart.
Hettinger	Adams	1,799	11	55.2	-2.6	85	26	32	19	0.22	-1.39	0.06	2	0	7	19	3	8	nw.	A. W. Anderson.
Kenmare	Ward	2,714	33	57.6	-0.2	90	17	26	9	0.14	-1.15	0.08	2	0	2	17	4	9	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,271	27	56.4	-0.2	92	17	28	19	0.20	-1.17	0.16	1	0	3	23	4	3	w.	S. P. Grane.
Medora	Billings	2,424	35	58.0	+0.2	91	27	28	23	0.08	-1.33	0.07	3	0	2	25	4	1	nw.	Harry Roberts.
Mott	Hettinger	2,400	48	58.6	+1.2	91	13	26	23	0.05	-1.33	0.05	1	0	1	19	8	3	nw.	P. G. Wick.
New England	Hettinger	2,400	48	58.6	+1.2	91	13	26	23	0.05	-1.33	0.05	1	0	1	19	8	3	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	1,929	27	52.3	-3.0	87	26	27	16	0.61	-0.93	0.20	2	0	5	14	16	0	nw.	Peter F. Fieck.
Parshall	Mountrail	1,954	37	53.2	-2.0	86	26	26	19	0.43	-1.16	0.10	8	0	8	21	3	6	nw.	C. E. Shubert.
Portal	Burke	2,205	37	53.4	-2.9	85	28	29	16	1.20	-0.31	0.38	15	0	5	13	13	4	w.	U. S. Customs Service.
Powers Lake	Burke	2,467	26	56.4	-1.8	88	26	31	19	0.27	-1.09	0.08	8	0	4	17	7	6	nw.	Geo. B. Gee.
Richardton, 1 1/4 miles N.	Stark	1,835	17	53.7	-3.8	86	26	27	16	0.70	-0.48	0.15	8	0	7	16	14	0	.....	Assumption Abbey.
Sanish	Mountrail	2,258	5	54.2	-0.7	87	26	26	19	0.71	-0.42	0.12	6-7	0	4	20	7	3	w.	H. J. Bugge.
Stanley	Mountrail	2,279	14	54.2	-0.7	87	26	26	19	0.71	-0.42	0.12	6-7	0	4	20	7	3	w.	Leroy Edwards.
Toga	Williams	2,279	14	54.2	-0.7	87	26	26	19	0.71	-0.42	0.12	6-7	0	4	20	7	3	w.	R. V. Olson.
Trotters	Golden Valley	1,864	3	55.4	-1.4	90	26	27	10	0.25	-0.90	0.15	6	0	5	16	12	2	nw.	Walter Grunewald.
Van Hook	Mountrail	2,084	29	56.3	-1.4	88	26	27	19	0.42	-0.90	0.14	7-8	0	5	16	12	2	nw.	V. L. Snyder.
Watford City	McKenzie	2,258	15	56.6	0.0	87	17	31	19	0.32	-0.77	0.13	0	0	5	14	10	6	nw.	J. C. Zeller.
Willrose	Williams	1,878	63	55.7	-1.2	94	27	21	10	0.33	-0.96	0.42	6-7	0	4	18	9	3	nw.	Fred E. Maucher.
Williston	Williams	1,878	63	55.7	-1.2	94	27	21	10	0.33	-0.96	0.42	6-7	0	4	18	9	3	nw.	U. S. Weather Bureau.
Average for Western Division				55.7	-1.2	94	27	21	10	0.33	-0.96	0.42	6-7	0	4	18	9	3	nw.	
Average for the State				55.6	-1.2	94	27	19	23	0.51	-1.03	1.70	1	0	4	17	9	4	nw.	

Daily Temperatures for September 1943

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum...	77	77	67	72	63	60	59	58	67	60	67	65	76	66	61	60	75	79	59	68	70	58	67	66	75	85	86	81	82	75	...	69.4	
	Minimum...	47	51	49	49	47	42	41	35	32	23	41	40	42	39	36	32	38	45	29	33	37	31	29	36	30	49	46	49	51	41	...	39.7	
Bismarck Airport ¹	Maximum...	82	73	72	80	66	63	60	56	67	65	75	66	88	67	59	63	81	77	61	70	70	61	71	67	80	89	88	84	84	75	...	72.0	
	Minimum...	47	56	49	50	48	44	45	40	34	27	42	47	46	42	39	37	45	45	33	32	39	34	32	38	39	49	50	50	57	46	...	42.7	
Bottineau	Maximum...	45	50	49	43	41	43	42	40	35	32	40	38	40	39	42	33	39	50	31	30	41	29	31	35	37	40	46	55	53	54	...	40.9	
	Minimum...	43	73	74	82	65	67	60	59	70	66	75	65	91	75	64	67	83	75	64	75	71	60	73	72	82	93	89	85	88	80	...	74.2	
Carson	Maximum...	44	50	46	47	49	41	45	38	31	32	44	37	42	43	32	31	42	48	28	37	40	31	31	38	43	47	50	55	53	41	...	41.2	
	Minimum...	72	63	77	88	54	56	55	59	62	70	61	68	80	65	61	68	87	60	62	72	62	63	71	74	81	93	94	84	83	73	...	70.6	
Crosby ⁵	Maximum...	51	49	41	42	48	39	40	33	36	29	29	39	44	43	44	27	28	48	29	32	42	34	34	35	34	39	43	42	44	40	...	38.8	
	Minimum...	78	70	75	76	66	58	55	57	54	63	63	67	80	61	54	59	74	77	55	68	62	56	65	62	74	82	80	85	84	74	...	67.8	
Devils Lake ¹	Maximum...	48	56	46	48	43	42	42	40	36	28	41	45	48	45	43	37	40	41	38	32	45	39	29	38	32	46	42	49	57	46	...	42.1	
	Minimum...	79	70	71	83	60	65	58	57	67	69	70	66	88	65	61	64	88	80	59	73	67	59	70	70	80	89	86	86	85	73	...	71.9	
Dickinson Airport ³	Maximum...	47	50	42	48	43	42	44	39	37	37	41	42	44	40	38	35	45	38	31	38	38	38	36	42	45	44	47	54	52	44	...	41.8	
	Minimum...	74	76	61	71	80	58	63	57	67	65	67	67	83	85	64	57	65	85	66	62	72	67	61	71	69	80	86	83	87	87	...	70.2	
Dunn Center ⁵	Maximum...	45	45	43	43	46	39	39	41	34	27	28	39	41	40	38	28	29	46	29	32	31	33	28	28	34	37	38	41	42	44	...	36.9	
	Minimum...	75	82	71	69	70	59	61	57	59	62	61	66	65	67	56	58	68	74	61	67	71	59	62	62	69	80	79	82	83	76	...	67.8	
Fargo Airport ¹	Maximum...	55	57	53	49	50	43	44	42	36	34	41	47	50	44	42	40	38	48	37	29	48	40	35	35	30	48	42	54	59	49	...	44.0	
	Minimum...	78	75	77	76	74	61	57	54	54	67	74	59	83	66	59	60	76	75	59	68	67	62	62	62	77	83	79	85	85	87	...	69.7	
Fessenden	Maximum...	48	52	44	48	52	42	43	40	36	28	41	45	46	44	41	37	45	51	34	34	43	32	28	40	32	48	41	48	58	38	...	42.0	
	Minimum...	75	80	69	69	63	60	60	58	67	59	66	61	70	66	60	59	73	80	59	68	71	61	67	65	72	80	84	81	80	76	...	68.6	
Fullerton	Maximum...	50	54	54	51	53	42	46	42	35	29	38	45	51	45	39	36	52	36	37	30	45	37	33	41	30	50	47	50	53	53	...	43.5	
	Minimum...	77	69	74	81	60	62	56	57	62	65	71	59	87	66	57	63	81	73	60	68	66	65	71	68	79	89	85	85	88	76	...	70.7	
Garrison ³	Maximum...	46	52	42	46	44	42	43	40	34	28	41	43	44	43	40	35	43	42	33	32	38	33	31	40	36	41	47	50	53	44	...	40.9	
	Minimum...	77	60	69	82	62	65	56	59	67	74	71	70	86	64	61	65	90	80	60	76	67	61	72	73	82	88	85	88	83	74	...	72.2	
Golva ³	Maximum...	44	47	40	43	42	35	42	31	29	33	38	35	41	34	33	28	44	34	27	27	35	32	29	40	38	37	39	42	45	38	...	36.7	
	Minimum...	77	78	77	78	63	69	61	58	57	62	64	70	73	74	63	60	74	77	73	67	71	60	60	61	72	80	80	84	85	83	...	68.0	
Grafton	Maximum...	52	58	49	46	55	43	43	42	35	32	36	42	47	45	45	42	34	52	40	29	50	43	30	43	27	44	44	45	56	53	...	41.9	
	Minimum...	81	79	79	71	75	59	55	54	60	64	64	71	70	67	57	62	69	77	62	66	71	57	61	63	70	82	84	83	85	85	78	...	69.2
Grand Forks Airport ³	Maximum...	53	58	51	47	46	41	42	41	35	30	38	43	49	44	45	38	35	44	35	31	47	42	33	33	28	48	43	63	60	43	...	42.5	
	Minimum...	79	79	74	73	66	62	61	58	66	62	70	64	78	66	59	60	76	83	60	70	70	62	66	65	74	86	81	84	86	77	...	70.6	
Jamestown Airport ³	Maximum...	50	55	50	47	42	42	42	41	31	25	38	47	47	41	38	36	35	42	31	25	42	34	25	32	27	48	42	48	55	41	...	40.0	
	Minimum...	75	66	74	80	58	60	56	60	59	64	63	64	80	63	58	62	79	63	62	67	58	63	71	65	76	85	80	84	83	73	...	68.4	
Kenmare	Maximum...	47	49	44	50	50	41	45	39	40	34	42	42	45	49	45	33	36	50	32	32	39	44	33	34	38	41	49	44	44	48	...	42.0	
	Minimum...	73	73	73	74	69	60	53	58	58	61	59	68	77	70	57	62	71	80	60	65	61	58	60	61	71	84	76	83	84	78	...	67.9	
Langdon	Maximum...	46	52	41	44	52	40	39	39	32	28	40	38	46	37	40	30	37	42	42	31	44	37	27	32	30	45	44	45	57	42	...	40.0	
	Minimum...	83	72	70	81	72	67	60	60	72	70	73	68	86	75	73	65	90	82	60	77	78	62	72	73	88	85	87	89	87	75	...	74.8	
Marmarth	Maximum...	43	56	42	45	59	34	44	48	26	44	40	33	52	43	35	27	55	48	26	27	46	35	26	31	36	36	40	45	55	36	...	40.4	
	Minimum...	75	63	72	79	70	59	57	59	56	64	66	60	80	63	55	60	80	73	58	65	61	59	69	65	78	83	80	84	87	70	...	68.3	
Minot Airport ³	Maximum...	48	48	45	51	43	43	43	42	39	32	45	45	43	48	47	40	45	42	33	34	42	34	33	39	39	40	43	41	52	43	...	42.1	
	Minimum...	81	76	72	82	76	67	60	60	66	70	73	65	90	83	63	67	87	82	62	76	71	63	73	71	86	90	91	85	88	74	...	75.0	
Mott	Maximum...	44	52	46	49	49	39	39	47	40	30	33	42	37	45	41	32	32	46	50	29	34	43	35	28	37	44	40	45	46	51	...	40.9	
	Minimum...	74	65	74	73	70	56	49	53	54	62	65	69	73	61	54	59	70	76	55	63	64	51	55	58	70	81	77	83	85	71	...	65.7	
Pembina Airport ³	Maximum...	51	56	49	46	47	44	36	42	34	34	36	40	45	43	40	39	34	44	35	29	45	36	27	32	27	45	40	44	59	46	...	40.8	
	Minimum...	78	78	75	71	70	59	58	57	59	63	63	68	72	65	59	60	73	82	59	68	68	61	65	61	70	83	80	82	84	76	...	68.9	
Sharon	Maximum...	48	53	47	45	50	37	39	41	33	33	40	45	45	42	39	39	45	50	34	34	43	37	32	43	30	49	47	47	58	50	...	42.5	
	Minimum...	78	78	80	75	76	62	53	56	70	64	72	80	72	63	57	79	76	59	70	67	62	70	67	76	76	85	85	83	80	75	...	71.0	
Steele	Maximum...	45	54	47	47	50	41	43	39	29	22	41	42	40	45	35	33	37	55	29	28	39	31	26	41	35	49	45	47	60	49	...	40.7	
	Minimum...	80	78	77	70	67	63	66	58	60	59	66	62	70	70	58	57	77	79	76	67	69	67	63	64	70	80	78	82	83	82	...	69.9	
Valley City	Maximum...	53	58	52	46	53	41	45	43	36	28	38	58	49	45	41	40	35	56	39	27	46	38	32	46	27	52	44	48	58	52	...	43.9	
	Minimum...	89	84	84	69	72	67	62	62	67	63	66	66	70	68	57	67	75	76	67	74	66	62	65	69	82	84	82	81	79	...	71.3		
Wahpeton	Maximum...	56	56	54	51	54	43	44	43	34	30	41																						

Daily Precipitation for September 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Casselton	Red.						.04		.08				.42																				0.54
Cooperstown	Sheyenne	.25					T.	T.	.07				.38	T.		.03																	0.73
Courtenay	James												.42																				0.42
Devils Lake 1	Devi's Lake		T.				.04	.07	T.	.03			.15								.02	T.		T.									0.31
Edgeley	James	1.32	.03	.11		.09	.02	.02	.01				T.																				1.60
Edmore	Devi's Lake		.15							.04			.15	T.	T.							.01			T.								0.35
Elleudale	James	.26		.15		.06	.06						.07													T.							0.60
Fargo 1	Red.	.13	.01	.01	T.	T.		.02	.04	T.		.23	.19							T.		T.			T.								0.79
Forman	Sheyenne	.14		.32	.04			.05	.07				.03			.03													.11				0.68
Fullerton	James	.52	.02	.16	T.	.03	T.	.04	.07				.01			T.																	0.85
Grafton	Red.	.76						T.	.10				.14									T.			T.								1.00
Grand Forks Airport 3	do		T.				.03	.07	T.	T.			.05									T.			T.								0.15
Hankinson 2	do	.11	.05	.24	.05	T.		.13	.04				.67				T.			T.		T.		T.	T.								1.29
Hannah	Pembina	.35							.25				.30			.05						.10		T.									1.06
Hillsboro	Red.		T.		T.			.05	.05				.20	.05																			0.35
Jamestown Airport 3	James			T.				.11	.02				.06	T.		.04						T.									T.		0.23
Langdon	Pembina		.27	.01				.01	.03	.16	.01		.18			.05							.03	.03									0.78
Larimore	Red.	1.25							.10				.22																				1.57
Lisbon	Sheyenne	.95		.09				.03	.09	.06				.30																			1.62
Mayville	Red.	1.70																															1.70
McHenry	James	.02						.01	.03	.08	.01		.58	.35		.01																	1.09
McLeod	Sheyenne	.69		.09	.11				.37				.52																				1.78
Oakes 2	James	.40		.12				.04		.03			.06																				0.65
Park River	Red.	.79	.12					T.	T.	T.		.12																					1.03
Pembina Airport 3	do		.26					.02	.23	.02	.04		.10																				0.73
Petersburg	do	1.05							.10				.14																				1.29
Sharon	do				T.	.04		.01	.01	.05	.01		T.																				0.12
Valley City	Sheyenne	.09		.04				.01	.04				.10			.09																	0.37
Wahpeton	Red.	.17	.03	.17				.02	.08	.09	T.		.02	.55							.01										.03		1.18
Middle Division																																	
Ashley 3	Missouri			.20		.02	T.	.05	T.				T.									T.											0.33
Bisbee	Devi's Lake		.15																														0.20
Bismarck 1	Missouri		.01			T.	.04	.06	.04				T.	T.		.08						T.	T.										0.23
Bottineau 2	Mouse	.08	.08					.54	.05																								0.75
Butte	do		T.	T.			.04	.12	.03	.05			.03	T.		.03																	0.25
Carrington 2	James	.07						.07																									0.20
Carson	Heart	.10		.14				.12								.05																	0.41
Center	Missouri	.06						.20	.17							.05																	0.48
Drake 2	Mouse	.02	T.				.05	.02	.13				.08																				0.31
Dunselth	do																																
Eckman	do		.06					.07	.12				.03																				0.33
Fessenden	James							.16					.25			.04																	0.45
Fort Yates	Missouri			.15			T.	T.								T.																	0.15
Foxholm	Mouse		.03			.01	T.	.05					.16			.07																	0.33
Gackle	James																																
Garrison 3	Missouri	T.	.02		T.	.05	.20	.14	.04							.01																	0.46
Granville	Mouse							.06	.01							.02																	0.09
Hansboro	Devi's Lake		.34					.04					.09		.01																		0.52
Linton	Missouri	.15		.15				.03	.03																								0.44
Maddock	Sheyenne		T.					.05	.07	.01			.22	.15																			0.60
Mandan 2	Missouri	T.		T.				T.	.01	T.						T.																	0.16
Max 2	do		.05	.01	T.			.22	.05	.02																							0.36
McClusky	do															T.																	

551.05
UNNT
1.52¹⁰

Not West

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

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UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LII BISMARCK, N. D., OCTOBER 1943 No. 10

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GENERAL SUMMARY

Temperatures averaged considerably above normal, but with the coolest periods near the middle and again near the close of the month. No near zero readings were recorded in any sections. The precipitation on the 12-13th ended a 6-weeks' dry period and some stations had no precipitation until the 20th. A few stations had their first snowfall on the 20th, but the first general snowstorm occurred on the 31st. Nearly 10 inches fell at some of the stations in the southern part of the state on that date. It was an excellent month for outdoor work and farm work was well along in spite of the labor shortage. Much grain was piled on the ground due to lack of storage space. Feed was plentiful until the snowstorm on the 31st and livestock were in good condition.

TEMPERATURE

The mean temperature for the state was 48.2°, or 4.2° above the 1892-1943 average for October. The mean temperature for the eastern division was 48.0°; for the middle division, 48.6°; and for the western division, 48.0°. The highest mean temperature was 50.9° at McClusky, and the lowest, 44.9° at Edmore, making a range in mean temperature of 6.0°. The absolute range was 79°, from 89° at Crosby on the 3d, to 10° at Edmore on the 30th. The average daily deficiency in temperature for the state since January 1, 1943, is 0.6°.

PRECIPITATION

The average precipitation for the state was 0.76 inch, or 0.25 inch less than the 1892-1943 average for October. In the eastern division the average amount was 0.86 inch; in the middle division, 0.64 inch; and in the western division, 0.78 inch. The greatest monthly amount reported was 2.02 inches at Wahpeton; the least was 0.04 inch at Drake. The greatest amount recorded in any 24 consecutive hours was 1.24 inches at Wahpeton on the 12th. The accumulated excess in precipitation for the state since January 1, 1943, is 1.80 inches. The average snowfall was 2.8 inches.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	2							8	1		3	1		5	3			2	1	1	1		10	30	34	27	3	15	4	1	4
Lunar halos																															
Solar halos								1																							
Sleet																															3
Thundrsts																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.48	25	29.12	20	10.2	38	nw.	12	68	80	50	52	64	496
Devils Lake	30.47	25	29.22	20	8.7	26	se.	19	66	76	45	48	76	526
Fargo	30.50	25	29.37	20	12.1	40	se.	19	72	80	51	57	73	516
Williston	30.39	1	29.03	20	6.2	26	w.	20	64	76	51	47	71	480

† And other dates.

COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	47.2	95	7	0.25	1.20	0.30	0.58	T.	3	15	8	8	
1893...	40.6	79	0	1.17	1.08	0.89	1.05	0.9	5	11	11	9	
1894...	43.0	77	16	2.28	1.76	0.94	1.66	0.0	6	14	8	9	
1895...	40.5	85	-12	0.31	0.15	0.27	0.24	0.0	2	16	8	7	
1896...	40.2	88	5	1.25	0.43	0.40	0.69	0.0	3	14	8	9	
1897...	45.9	93	6	1.01	0.75	0.56	0.77	0.8	4	13	9	9	
1898...	38.8	84	8	2.60	2.42	1.67	2.23	4.7	6	8	8	15	
1899...	42.1	86	7	1.16	1.21	1.15	1.17	1.3	5	11	8	12	
1900...	48.2	87	14	2.34	1.30	0.98	1.54	T.	6	15	4	12	
1901...	47.5	88	11	2.96	1.22	0.65	1.61	T.	5	17	7	7	
1902...	43.7	87	10	1.70	1.20	0.55	1.28	0.7	4	16	6	9	
1903...	47.0	81	11	1.42	0.80	0.60	0.94	0.2	3	19	5	7	
1904...	46.6	87	10	1.55	0.60	0.46	0.90	T.	5	12	7	12	
1905...	40.3	93	0	0.59	0.22	0.28	0.36	1.2	5	8	12	11	
1906...	45.0	89	0	0.75	0.45	0.27	0.49	1.4	4	14	9	8	
1907...	44.4	88	4	1.02	0.66	0.16	0.61	0.2	3	21	5	5	
1908...	43.0	86	8	1.46	1.36	2.07	1.63	0.7	6	11	7	13	
1909...	43.1	97	0	0.88	0.63	0.45	0.65	0.9	3	14	8	9	
1910...	48.2	95	0	0.49	0.66	0.38	0.51	0.1	3	16	8	7	
1911...	42.5	86	-10	1.25	1.27	1.20	1.24	0.5	6	11	8	12	
1912...	44.4	90	0	0.68	1.09	1.44	1.07	3.5	4	16	6	9	
1913...	39.3	90	-2	2.40	1.34	1.03	1.59	0.7	4	12	9	10	
1914...	50.0	97	0	1.20	0.93	0.65	0.93	T.	4	16	8	7	
1915...	46.6	87	10	1.22	0.91	1.14	1.09	0.2	4	17	8	7	
1916...	40.0	85	-2	0.49	0.88	0.73	0.70	2.0	4	12	8	11	
1917...	34.7	82	-4	0.87	0.76	0.71	0.78	6.4	5	8	11	12	
1918...	46.2	90	4	0.80	0.45	0.35	0.53	0.8	4	14	8	9	
1919...	33.5	84	-18	0.93	1.14	1.35	1.14	9.3	6	11	8	11	
1920...	49.3	95	6	0.53	0.28	0.83	0.55	0.1	2	16	8	7	
1921...	47.3	88	16	0.80	1.09	0.10	0.66	T.	4	16	8	9	
1922...	45.7	98	8	0.37	0.65	0.73	0.58	2.3	3	15	7	9	
1923...	44.0	84	-8	0.56	1.02	1.08	0.89	0.5	4	14	7	10	
1924...	50.3	86	19	2.31	2.14	2.82	2.42	0.3	7	17	5	9	
1925...	33.3	66	-16	0.83	0.64	0.96	0.81	3.7	6	8	9	14	
1926...	42.6	85	4	2.54	0.86	0.68	1.36	1.0	6	10	10	11	
1927...	47.0	88	12	1.53	1.49	0.96	1.33	1.0	5	14	8	9	
1928...	43.5	85	3	0.69	0.18	0.51	0.46	0.6	2	15	8	8	
1929...	46.8	88	10	2.87	1.63	1.05	1.85	5.1	6	17	5	9	
1930...	40.8	86	0	2.04	1.90	1.48	1.81	0.3	7	10	9	12	
1931...	47.7	90	10	2.63	0.93	0.60	1.39	0.2	6	15	6	10	
1932...	38.3	90	-3	2.33	2.41	2.06	2.27	9.1	8	9	7	15	
1933...	41.5	88	5	0.39	0.48	0.74	0.54	1.7	4	14	8	9	
1934...	49.0	94	5	2.11	0.83	0.08	1.01	0.1	3	14	8	9	
1935...	43.5	86	-10	0.29	0.08	0.12	0.16	0.7	2	15	9	7	
1936...	42.3	90	-5	0.23	0.16	0.24	0.21	1.1	3	14	9	8	
1937...	43.9	94	1	0.40	0.92	1.08	0.80	0.2	4	12	9	10	
1938...	50.9	95	4	0.27	0.44	0.95	0.55	1.1	4	16	7	8	
1939...	41.3	84	-6	1.17	0.64	0.44	0.75	1.2	7	8	10	13	
1940...	50.7	89	18	2.16	1.26	1.26	1.56	T.	6	14	8	9	
1941...	44.5	81	0	1.78	1.24	0.94	1.32	2.0	5	13	9	9	
1942...	46.5	90	-3	0.55	0.41	0.42	0.46	1.8	4	14	8	9	
1943...	48.2	89	10	0.86	0.64	0.78	0.76	2.8	3	18	6	7	
Period	44.0	98	-18	1.26	0.95	0.83	1.01	1.4	4	14	8	9	

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HIST.

Climatological Data for October 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Casselton	Cass	961	47	48.8	+4.1	86	11	20	16†	1.40	-0.07	0.85	12-13	0	2	22	4	5	s.	C. Hayford.	
Cavalier	Pembina	894	33	47.4		88	8	18	30	0.27	-1.14	0.18	12-13	0	2	16	8	7	s.	City Light & Power Co.	
Colgate	Steele	1,180	10							0.95		0.50	31	T	3	19	10	2	ne.	O. M. Jensen.	
Cooperstown	Griggs	1,428	46	48.7	+4.0	87	8	16	30	0.39	-0.73	0.21	31	2.1	3	22	7	2	se.	R. J. Lockner	
Courtenay	Stutsman	1,523	13							0.34	-0.99	0.22	19	1.0	2	22	3	6	s.	G. H. Hanawalt.	
Devils Lake	Ramsey	1,478	46	48.0	+5.6	83	8	17	30	0.40	-0.85	0.19	20	1.5	3	15	6	10	se.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	42	48.1	+2.5	86	11	19	16†	0.93	-0.16	0.55	30-31	5.0	3	17	10	4	s.	N. Dak. Agri. Exp. Sta.	
Edmore, 1½ miles W.	Ramsey	1,524	19	44.9	+2.4	84	8	10	30	0.17	-0.88	0.10	31	0	2	21	7	3	s.	Mike Davis.	
Ellendale	Dickey	1,457	48	48.4	+2.5	85	11	20	16	1.11	0.00	0.64	31	6.6	3	22	4	5	s.	J. E. Demmer.	
Fargo Airport, 2½ mi. NNW	Cass	895	16	48.5	+4.0	85	11	20	30	1.64	-0.05	0.66	31	T.	4	17	7	7	s.	U. S. Weather Bureau.	
Forum	Sargent	1,249	50	49.7	+6.7	83	11	23	16†	1.42	-0.03	0.72	13	2.0	2	25	4	2	n.	Helge Dyre.	
Fullerton	Dickey	1,439	45	48.0	+2.7	83	8†	21	16†	1.60	+0.17	1.22	30-31	7.0	2	19	7	5	s.	F. O. Allen.	
Grafton	Walsh	827	51	49.5	+5.7	87	8	18	30	0.62	-0.60	0.23	20	T.	3	20	4	7	se.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	52	47.2	+3.5	81	4	15	30	1.64	-0.66	0.40	31	T.	3	17	6	8	ne.	University of N. Dak.	
Grand Forks Apt., 2½ mi. W	Grand Forks	833	3	47.1		87	8	16	30	1.02		0.45	31	T.	4	18	6	7	se.	U. S. Airway Comm. Sta.	
Hankinson	Richland	1,068	14	47.8	+1.2	86	11	21	15†	1.91	+0.72	1.00	13	T.	3	23	4	4	se.	Soo Line Agent.	
Hannah	Cavalier	1,568	51	46.4	+5.6	82	4	17	30	0.15	-0.99	0.10	31	1.0	2	14	10	7	sw.	A. E. Prior.	
Hillsboro	Trall	901	43	47.8	+2.6	85	8	19	30	1.30	-0.17	0.56	13†	T.	3	18	6	7	s.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	51	48.9	+4.2	84	8†	19	30	0.40	-0.88	0.27	31	2.5	3	26	5	3	s.	N. Dak. State Hospital.	
Jamestown Airport, 2 mi. NE	Stutsman	1,494	3	47.4		85	11	14	30	0.57		0.51	31	2.9	3	20	3	8	se.	U. S. Airway Comm. Sta.	
Kensal, 7 miles SW	Stutsman	1,440	4	46.9		86	8	13	30	0.29		0.29	31	2.9	1	21	7	3	nw.	U. S. Wildlife Refuge.	
Langdon, 1 mile E	Cavalier	1,615	47	47.8	+6.9	87	8	14	30	0.25	+0.89	0.17	20	0	2	18	11	2	s.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	50	48.0	+3.9	88	8	16	30	0.98	-0.58	0.47	13	1.5	3	20	4	7	sw.	W. L. Goodison.	
Lisbon	Ransom	1,091	39	48.8	+4.1	86	8	18	16	1.31	-0.02	0.66	31	T.	3	20	5	6	se.	J. O. Halverson.	
Mayville	Trall	975	47	49.4	+3.4	85	8	21	16	1.17	-0.17	0.71	13	1.0	2	23	2	6	s.	H. B. Addicott.	
McHenry, 3 miles NE	Eddy	1,509	21	46.6	+3.3	87	8	15	25†	0.34	-0.64	0.23	19	0.5	2	20	7	4	se.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	32	47.6	+1.1	80	1†	20	16	0.41	-1.07	0.25	12-13	0	2	23	5	3	sw.	J. G. Carlson.	
McVie	Nelson	1,467	13							0.23		0.23	30-31	2.0	1	17	10	4	s.	A. M. Casad.	
Millnor	Sargent	1,117	4	48.2		84	8	19	16†	1.78	+0.32	1.02	13	4.0	2	19	3	9	sw.	E. W. Wilson.	
Oakes	Dickey	1,318	14	47.8	+1.8	83	8†	20	30	1.46	+0.10	1.01	30-31	5.0	3	22	0	9	s.	F. H. Murray.	
Park River	Walsh	998	39	47.4	+3.7	85	8	16	30	0.21	-1.07	0.18	31	T.	2	25	2	4	nw.	Martin Severson.	
Pembina, 2½ miles N	Pembina	789	69							0.66	-0.65	0.30	20	T.	3	10	13	8	s.	S. W. Douglas.	
Pembina Airport, 1 mile S.	Pembina	795	4	46.7	+5.1	85	4	14	30	0.66	-0.65	0.30	20	T.	3	10	13	8	s.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,520	13							0.74	-0.47	0.36	31	4.0	3	20	3	4	se.	T. M. Rykken.	
Sharon	Steele	1,516	19	48.0	+4.4	84	8	19	30	0.83	-0.53	0.37	31	3.0	3	10	8	4	s.	Nels O. Grefshelm.	
Valley City	Barnes	1,245	37	49.2	+4.1	83	8†	19	16	1.01	-0.17	0.50	31	4.0	3	22	3	6	sw.	I. C. Robertson.	
Wahpeton	Richland	962	51	50.2	+3.2	86	11	19	30	2.02	+0.45	1.24	12	T.	3	18	6	7	se.	W. J. Cavanaugh.	
Average for Eastern Division				48.0	+3.7	88	8	10	30	0.86	-0.40	1.24	12	1.7	3	20	6	5	s.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,014	47	47.7	+3.3	85	11	23	16	0.88	-0.28	0.47	30-31	8.0	6	13	8	10	se.	U. S. Airway Comm. Sta.	
Beulah	Mercer	1,797	29							1.44	+0.51	0.93	23-24	4.1	4	18	8	5	se.	Knife Rvr. Coal Mng. Co.	
Bisbee	Towner	1,601	40	48.9	+5.1	87	8	12	30	0.43	-0.66	0.32	31	3.0	2	21	7	3	se.	Robert L. Peterson.	
Bismarck	Burleigh	1,070	69	50.3	+5.1	86	10	24	17	1.50	+0.51	1.04	24	4.8	3	14	8	9	se.	U. S. Weather Bureau.	
Bismarck Airport, 2½ mi. SE	Burleigh	1,050	4	49.0	+5.4	86	10	22	17	1.54	+0.60	1.02	23-24	5.0	6	14	8	9	se.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	51	48.8	+7.4	85	4	22	17†	2.55	-0.83	0.25	20	0	1	23	4	4	se.	N. D. School of Forestry	
Butte, 3 miles WSW	McLean	1,880	17	49.6	+4.8	85	8	21	31	0.34	-0.73	0.22	31	2.5	3	15	9	7	s.	R. L. Williams.	
Carrington	Foster	1,579	45	46.8	+3.1	86	11	14	30†	0.15	-0.83	0.10	20	0.8	2	22	2	7	s.	Soo Line Agent.	
Carson, 2½ miles SW	Grant	2,500	31	50.3	+5.8	88	8†	23	21	1.41	+0.44	0.75	23	7.0	5	17	6	8	s.	J. W. Evans.	
Center	Oliver	2,100	5	47.6		86	11	17	17	1.20		0.61	23-24	4.4	4	17	6	8	se.	Fred L. Heinz.	
Drake	McHenry	1,634	14	48.8	+5.7	86	8	18	30	0.04	-0.94	0.04	19	0	1	17	4	10	s.	H. G. Kringen.	
Dunseith, 2 miles NNE	Rolette	1,682	47	48.3	+6.7	82	8†	21	17	0.45	-0.50	0.37	19-20	0.8	2	23	3	5	ne.	Hubert Downs.	
Eckman	Bottineau	1,509	38	49.4	+7.2	84	4†	16	30	0.40	-0.53	0.40	31	4.5	1	19	4	8	se.	E. R. Sherman.	
Fessenden	Wells	1,610	31	49.0	+5.7	87	11	15	30	0.40	-0.69	0.20	20†	2.0	2	20	6	5	n.	John V. Zuber.	
Fort Yates	Sioux	1,670	43	49.4	+2.7	87	11	19	17	1.35	+0.23	1.00	30-31	10.0	2	21	6	4	se.	P. J. Jacobson.	
Foxholm, 6½ miles NE	Ward	1,657	22	48.4	+5.5	85	10	17	30	0.37	-0.64	0.23	23-24	3.0	3	11	12	8	sw.	E. C. Bierbaum.	
Gackle	Logan	1,951	13							0.84	-0.10	0.51	23-24	1.8	4	14	8	9	se.	Jack Dixon.	
Garrison	McLean	1,125	66	48.5	+5.3	86	8†	22	17	0.84	-0.10	0.51	23-24	1.8	4	14	8	9	se.	Mae H. Vorachek.	
Granville	McHenry	1,504	36	48.0	+4.4	86	10	17	30	0.18	-0.75	0.18	31	2.0	1	21	6	4	nw.	Fred Risher.	
Hansboro	Towner	1,597	35	45.8	+4.5	83	4	13	30	0.57	-0.54	0.44	31	4.4	3	21	6	4	sw.	W. E. Disher.	
Harvey	Wells	1,596	40							0.43	-0.70	0.27	31	3.0	2	14	11	6	s.	Orville Hoksche.	
Leeds	Benson	1,515	3	48.4		84	4†	13	30	0.35		0.35	31	T.	1	13	13	5	s.	John Dulmage.	
Linton	Emmons	1,711	26	50.7	+5.2	87	11	19	17	1.26	+0.15	0.78	30-31	5.0	4	16	4	11	se.	Wm. Heyerman.	
Maddock, 1 mile E††	Benson	1,604	28	47.9	+4.4	86	10	12	30	0.24	-0.85	0.20	30	0	2	17	8	6	sw.	A. T. Felland.	
Mandan, 1½ miles SW	Morton	1,750	29	48.9	+4.2	87	10	25	17	1.52	+0.53	0.87	24	3.5	2	15	3	13	se.	No. Gt. Plains Field. Sta.	
Max	McLean	2,093	14	47.2†	+4.3	85†	11														

Climatological Data for October 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division																					
Almont, 7 miles WSW	Morton	2,300	1	49.6		85	10	26	21	1.62		0.83	23	6.8	6	15	8	8	se.	Hogan Ramsland.	
Alpha, 1 mile S	Golden Valley	16	20							0.71	-0.27	0.28	31	5.5	4	23	3	5	nw.	H. A. Bury.	
Amidon	Slope	2,908	20							0.56	+0.46	0.49	30	8.0	6	18	6	7	se.	A. M. Neseth.	
Beach	Golden Valley	2,759	37	48.6	+4.1	85	31	21	15	0.72	-0.22	0.28	31	4.2	4	15	12	4	e.	Mrs. Belle Callahan.	
Bowbells	Burke	1,958	14	46.1	+5.5	86	10	19	23	0.32	-0.66	0.23	23	T	4	13	6	12	w.	Charles Kaufman.	
Bowman	Bowman	2,872	28	48.2	+3.4	84	3	25	21	0.83	-0.15	0.42	23	1.6	5	16	6	9	se.	Oscar L. Erickson.	
Crosby	Divide	1,954	34	49.2	+7.0	89	3	22	14	0.74	-0.10	0.33	20	2.4	3	12	6	13	sw.	George M. Phelps.	
Dickinson, 1 mile NW	Stark	2,543	50	46.2	+2.4	85	8	19	17	0.80	-0.18	0.33	23-24	6.0	4	19	8	4	e.	Leroy Moomaw.	
Dickinson Airt., 5 1/2 mi. S.	Stark	2,577	3	49.0		85	10	26	14	0.46	-0.23	0.23	23-24	2.4	6	12	0	13	se.	U. S. Airway Comm. Sta.	
Dunn Center	Dunn	2,191	43	48.0	+5.9	88	8	18	17	0.89	-0.02	0.40	30-31	5.0	5	16	9	6	se.	O. T. Evenson.	
Elbowoods	McLean	2,082	49	48.6	+3.8	88	10	20	17	0.70	-0.19	0.28	31	3.4	3	16	7	8	nw.	H. W. Case.	
Epping	Williams	2,224	32	49.6	+7.5	87	4	21	29	0.26	-0.53	0.14	20	1.2	2	21	5	5	se.	T. Beachler.	
Fairfield, 9 1/2 miles N.	Billings		6							0.80	+0.16	0.34	19-20	4.0	3	20	4	7	se.	Mrs. Edith Larson.	
Fryburg, 2 miles N	Billings	2,790	24	47.8		85	10	25	23	1.24	+0.19	0.47	19-20	7.6	4	11	10	10	nw.	Verne King.	
Golva, 1 mile E	Golden Valley	2,781	3	46.2		84	31	19	17	0.67		0.29	31	6.0	5	14	6	11	se.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	34	48.9	+6.8	87	4	22	15	0.44	-0.35	0.44	20	T	1	19	6	6	nw.	John S. Sorenson.	
Halliday	Dunn	2,073	3																	A. L. Gerhart.	
Hettinger	Adams	2,675	35	49.8	+3.7	86	8	22	29	0.80	+0.03	0.80	31	9.0	1	23	4	4	se.	A. W. Anderson.	
Kenmare	Ward	1,799	11	47.8	+1.9	86	7	22	23	0.24	-0.82	0.24	23-24	0	1	20	2	9	se.	Theo. E. Eckberg.	
Marmarth	Slope	2,713	33	47.0	+1.0	87	4	19	15	1.19	+0.34	0.35	30	6.5	6	20	3	8	se.	S. P. Grane.	
Medora	Billings	2,271	27							0.99	+0.17	0.38	30-31	8.0	3	22	2	7	se.	Harry Roberts.	
Mott	Hettinger	2,424	35	46.6	+5.2	88	8	20	17	0.64	-0.30	0.31	30-31	4.0	4	21	5	5	se.	P. G. Wick.	
New England	Hettinger	2,400	48	49.2	+5.1	88	8	19	17	0.64	-0.20	0.22	19-20	1.0	4	16	5	10	se.	F. S. Sleight.	
New Hradec, 1 mile E.	Dunn		2	47.0		83	11	17	17	0.63		0.37	30-31	4.2	4	20	3	8	se.	Peter F. Fieck.	
Parshall	Mountrail	1,929	27	45.4	+1.0	85	10	16	17	0.61	-0.20	0.42	23-24	2.0	4	14	13	4	se.	C. E. Shubert.	
Portal	Burke	1,954	37	46.4	+4.9	88	4	16	23	0.34	-0.55	0.28	23-24	0	3	18	2	11	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	37	46.4	+1.9	82	8	22	29	0.60	-0.62	0.27	31	0	3	17	10	4	w.	Geo. B. Gee.	
Richardton, 1 1/2 miles N	Stark	2,467	26	50.0	+5.4	85	10	24	14	1.48	+0.60	1.10	30-31	8.5	4	15	9	7	se.	Assumption Abbey.	
Sanish	Mountrail	1,835	17	46.0	+1.8	87	10	17	24	0.98	+0.17	0.53	23-24	5.0	2	19	8	4	.....	H. J. Bugge.
Stanley	Mountrail	2,258	5	46.2		84	7	23	0.65		0.27	23-24	2.2	3	17	7	7	7	s.	Leroy Edwards.	
Tioga	Williams	2,279	14																	H. Francis Cannon.	
Trotters	Golden Valley		17							0.80	-0.03	0.43	20	T	3	6	20	5	se.	Walter Grunewald.	
Van Hook	Mountrail	1,864	3	47.4		87	10	19	17	0.70		0.50	23-24	2.0	3	18	4	9	nw.	V. L. Snyder.	
Watford City	McKenzie	2,084	29	49.7	+5.5	87	4	21	17	1.15	+0.28	0.54	20	8.0	4	16	8	7	se.	J. C. Zeller.	
Willrose	Williams	2,254	15							0.70	-0.16	0.47	20	0.7	3	15	3	13	se.	Fred E. Maucher.	
Williston	Williams	1,878	63	49.6	+6.2	87	4	25	17	0.70	-0.16	0.47	20	0.7	3	15	3	13	se.	U. S. Weather Bureau.	
Average for Western Division				48.0	+4.4	89	3	16	17	0.78	-0.05	1.10	30-31	8.8	4	17	6	8	se.		
Average for the State				48.2	+4.2	89	3	10	30	0.76	-0.25	1.24	12	2.8	3	18	6	7	se.		

Daily Temperatures for October 1943

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley ³	Maximum...	75	77	77	77	75	75	80	83	67	83	85	64	48	45	55	54	66	66	71	58	60	64	49	57	45	46	55	62	54	34	33	62.6
	Minimum...	33	37	44	40	45	40	30	36	39	39	40	46	53	28	25	23	25	33	37	33	27	30	34	39	26	27	27	26	24	24	29	32.8
Bismarck Airport ¹	Maximum...	77	80	79	81	79	79	80	85	68	86	81	66	50	48	54	58	65	68	73	53	62	59	49	51	44	44	57	59	54	38	33	63.2
	Minimum...	35	41	48	41	48	40	34	35	38	44	40	46	35	32	33	30	22	38	36	27	30	37	34	26	31	31	30	30	27	26	29	34.9
Bottineau ⁵	Maximum...	78	84	85	86	80	81	85	85	84	84	80	68	42	48	55	65	74	62	69	47	54	58	58	59	48	50	58	52	52	43	40	64.8
	Minimum...	31	41	38	46	48	44	40	37	38	37	40	38	30	27	25	25	22	23	40	42	37	31	28	27	29	27	27	26	22	22	23	32.9
Carson	Maximum...	80	80	82	81	80	81	82	88	70	88	87	72	57	47	58	59	66	68	70	53	62	64	43	47	53	48	63	62	57	42	33	65.3
	Minimum...	39	39	45	46	50	42	37	42	36	43	48	47	37	27	26	30	27	42	36	35	29	33	29	38	32	28	28	31	25	27	25	35.3
Crosby ⁵	Maximum...	73	78	89	86	82	82	82	82	69	83	87	70	44	52	58	65	67	61	55	55	50	56	46	50	54	57	65	54	56	45	42	64.4
	Minimum...	34	37	43	45	43	39	38	42	33	44	45	42	32	22	24	35	26	41	33	33	32	27	23	37	32	35	31	29	22	30	26	34.0
Devils Lake ¹	Maximum...	69	80	80	82	80	80	82	83	64	81	82	67	44	41	50	60	62	58	64	58	56	61	50	51	45	51	59	53	48	40	35	61.5
	Minimum...	38	41	46	42	44	46	42	47	38	38	46	44	33	26	27	24	26	34	39	41	34	33	34	29	22	34	26	30	24	17	26	34.5
Dickinson Airport ³	Maximum...	78	80	83	81	79	80	80	84	71	85	82	59	52	42	53	62	64	60	60	43	56	56	45	49	56	48	68	59	59	35	32	62.6
	Minimum...	40	46	45	44	47	41	40	46	39	46	46	40	34	26	26	32	30	36	32	32	29	35	27	32	33	30	29	33	28	28	27	35.5
Dunn Center ⁵	Maximum...	80	82	85	84	82	81	83	88	78	88	75	65	49	43	57	65	66	61	63	61	58	59	52	47	55	50	69	68	54	45	34	65.4
	Minimum...	33	38	36	33	35	32	32	33	33	41	31	46	36	24	25	26	18	34	28	33	26	25	20	37	26	25	31	26	25	28	30.5	
Fargo Airport ¹	Maximum...	70	74	77	79	78	77	80	83	67	71	85	72	50	38	47	47	59	61	68	61	58	62	55	55	44	49	54	57	51	44	39	61.7
	Minimum...	39	36	43	46	45	45	38	43	43	39	53	49	34	27	21	22	31	29	35	39	33	36	33	33	31	27	30	32	28	20	35	35.3
Fessenden	Maximum...	76	79	81	81	81	80	85	81	70	85	87	75	51	45	53	50	65	58	65	61	60	60	52	59	50	49	64	55	53	40	33	64.0
	Minimum...	37	39	50	46	48	45	43	45	34	39	42	49	31	30	30	23	28	33	35	41	23	32	23	35	24	27	24	29	25	15	25	34.0
Fullerton	Maximum...	70	75	76	76	75	72	77	83	66	79	83	73	58	43	50	52	62	66	70	64	59	67	57	54	45	49	58	62	55	46	37	63.2
	Minimum...	40	38	35	36	35	32	35	38	40	34	40	58	36	33	26	21	25	33	35	41	23	32	23	35	24	28	25	28	21	32	32	32.8
Garrison ³	Maximum...	76	81	82	81	80	81	82	86	67	86	76	68	48	43	52	59	64	65	67	57	58	60	44	49	49	47	61	60	60	36	33	63.1
	Minimum...	34	40	40	40	41	37	37	35	38	42	41	45	32	29	31	27	22	39	37	37	35	28	33	32	38	28	28	30	27	25	29	33.9
Golva ³	Maximum...	78	82	84	83	81	79	80	84	76	84	79	56	54	43	55	62	62	63	64	39	56	55	48	53	59	59	71	59	57	39	31	63.4
	Minimum...	35	36	35	33	28	29	29	42	35	42	36	37	29	29	20	24	19	26	26	30	32	26	24	22	24	28	29	21	27	27	27	29.1
Grafton	Maximum...	74	76	83	84	83	83	81	87	78	73	80	76	66	39	49	47	63	60	68	63	58	63	59	68	66	52	57	59	57	45	42	65.8
	Minimum...	39	33	41	40	39	40	38	45	40	37	44	57	35	32	20	19	23	24	33	47	31	28	31	26	35	24	24	25	30	18	31	33.2
Grand Forks Airport ³	Maximum...	74	75	81	82	81	81	83	87	66	70	81	73	46	38	46	46	59	61	69	59	58	63	60	43	42	49	54	57	48	44	40	61.8
	Minimum...	36	37	40	44	40	42	39	41	43	35	49	44	32	24	22	22	27	25	37	39	32	30	32	25	25	24	25	26	21	16	30	32.4
Jamestown Airport ³	Maximum...	74	79	79	81	79	80	82	84	67	82	85	70	46	45	53	52	66	62	66	58	61	63	53	56	47	51	59	61	55	38	36	63.5
	Minimum...	35	37	40	40	40	35	37	37	36	35	45	43	32	23	24	20	24	31	38	39	28	30	34	23	17	27	25	25	21	14	31	31.2
Kenmare ⁵	Maximum...	73	80	81	84	80	85	86	83	65	84	79	53	42	49	56	65	65	63	63	45	54	50	44	45	53	51	67	53	54	37	33	61.7
	Minimum...	37	40	43	48	49	43	41	44	36	37	45	45	32	25	25	32	28	35	30	30	35	25	26	22	24	35	33	33	29	22	33.8	
Langdon	Maximum...	73	77	80	83	80	82	82	87	65	76	79	69	38	53	47	67	59	65	59	55	60	58	52	47	50	60	60	47	41	37	63.5	
	Minimum...	30	40	41	43	41	40	41	41	43	40	47	35	30	28	27	22	22	30	35	44	34	32	32	20	27	25	25	21	14	24	32.1	
Marmarth	Maximum...	79	81	85	87	83	79	80	86	78	86	80	67	58	57	56	65	65	62	65	53	50	57	43	51	53	50	59	73	59	58	48	65.3
	Minimum...	31	34	34	32	29	29	31	29	33	34	34	46	30	31	19	30	19	29	30	32	22	25	19	24	31	26	21	29	19	28	28	28.6
Minot Airport ³	Maximum...	71	83	81	82	79	81	83	83	65	85	77	61	43	43	55	59	64	64	64	59	55	58	44	51	52	50	60	51	51	37	32	62.0
	Minimum...	35	37	50	52	51	49	45	48	37	49	44	42	31	30	32	32	31	34	34	32	37	31	26	26	36	28	31	30	28	19	28	36.0
Mott	Maximum...	79	81	84	83	80	81	82	88	78	86	84	76	53	55	62	65	64	61	52	60	60	60	50	51	55	50	71	60	56	43	32	65.6
	Minimum...	33	46	46	38	47	35	32	34	40	46	36	49	40	28	23	28	20	36	35	30	23	31	25	37	34	28	26	31	24	29	28	33.5
Pembina Airport ³	Maximum...	68	74	83	85	83	76	79	84	61	70	80	71	45	41	48	45	61	60	70	56	59	61	59	43	43	50	55	56	43	44	39	61.0
	Minimum...	39	35	42	43	43	41	34	42	36	36	50	44	29	25	18	18	25	27	33	40	34	30	33	27	32	26	27	26	23	14	29	32.4
Sharon	Maximum...	72	76	79	81	79	80	83	84	64	76	82	72	50	39	48	64	60	67	57	60	61	56	46	38	50	57	60	53	39	34	61.8	
	Minimum...	38	44	46	46	44	40	40	38	40	37	49	50	32	27	21	22	25	32	33	43	30	33	32	29	27	33	26	27	26	19	28	24.1
Steele	Maximum...	74	80	75	80	78	75	79	82	68	83	85	69	47	45	54	56	66	70	64	60	59	50	55	48	51	59	60	55	38	36	63.5	
	Minimum...	34	54	49	42	43	39	35	36	37	40	40	38	32	28	28	24	20	36	36	36	23	43	34	38	17	22	23	23	21	18	26	32.7
Valley City	Maximum...	73	75	77	78	77	76	79	83	82	78	83	81	65	41	45	47	62	60	66	62	61	61	61	52	50	50	57	59	55	47	43	64.1
	Minimum...	35	35	40	42	41	37	35	33	42	35	47	55	36	34	24	19	24	21	37	46	29	35	37	34	27	37	26	26	28	27	32	34.4
Wahpeton	Maximum...	78																															

Daily Precipitation for October 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Casselton	Red.													.85																		.55	1.40	
Cooperstown	Sheyenne													.13							.05											.21	0.89	
Courtenay	James																				.22				.03							.12	0.34	
Devils Lake 1	Devils Lake																				.19											.18	0.40	
Edgeley	James													.26							.12											.55	0.93	
Edmore	Devils Lake													.07							.07											.10	0.17	
Ellendale	James													.35							.12											.64	1.11	
Fargo 1	Red.												10	.50	T.						.38											.66	1.64	
Forman	Sheyenne												T.	.72																		.70	1.42	
Fullerton	James												T.	.38													T.						1.22	1.60
Grafton	Red.													.20							.23											.19	0.62	
Grand Forks Airport 3	do												11	.18	T.						.28											.45	1.02	
Hankinson 2	do													1.00							T.		.36										.55	1.92
Haunah	Pembina																				.05											.10	0.15	
Hillsboro	Red.												T.	.56	T.						.18											.56	1.30	
Jamestown Airport 3	James																				.02											.51	0.57	
Langdon	Pembina													.04	T.																	.08	0.25	
Larimore	Red.																				.17											.51	0.57	
Lisbou	Sheyenne												T.	.47																		.39	0.98	
Mayville	Red.													.51							.14											.66	1.31	
McHenry	James													.71																		.46	1.17	
McLeod	Sheyenne												T.	.25								.23										.11	0.34	
Oakes 2	James													.41																		.16	0.41	
Park River	Red.																				.03											.18	0.21	
Pembina Airport 3	do													.18	T.																	.18	0.66	
Petersburg	do													.18																		.36	0.74	
Sharon	do													.35																		.37	0.83	
Valley City	Sheyenne													.44	T.																	.50	1.01	
Wahpeton	Red.													1.24	T.						.31											.47	2.02	
Middle Division																																		
Ashley 3	Missouri																				.12				.19	.05						.19	.31	0.88
Bisbee	Devils Lake																				.11											.32	0.43	
Bismarck 1	Missouri													T.	T.	.01					.02				.83	.20					.03	.45	1.54	
Bottineau 2	Mouse																				.25												.25	
Butte	do																				.02	T.			T.	.10						.22	0.34	
Carrington 2	James																				.10											.05	0.15	
Carson	Heart												T.								.11				.57	.18					10	.45	1.41	
Center	Missouri												T.			.01	.03				T.					.61						.55	1.20	
Drake 2	Mouse																				.04												.04	
Dunseith	do																				.37	T.			T.							.08	0.45	
Eckman	do																																.40	0.40
Fessenden	James																				.20											.20	0.40	
Fort Yates	Missouri																								.35							1.00	1.35	
Foxholm	Mouse																				.02				T.	.23						.12	0.37	
Gackle	James																				.29											.30	0.59	
Garrison 3	Missouri															.03								.22	.29							.30	0.84	
Granville	Mouse																				T.					T.						.18	0.18	
Hansboro	Devils Lake																																	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹ Precipitation is for the 24-hours, midnight to midnight. ² Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. ³ Data for 24 hours ending 12:30 a. m. C.S.T. [†] Precipitation measured with recording gage. * Included in the next measurement T. Trace, or 0.005 inch or less [WBO, Minneapolis, 11-30-43-1050]

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

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UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LII BISMARCK, N. D., NOVEMBER 1943 No. 11

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GENERAL SUMMARY

November was a mild month. The temperature averaged near normal during the first half and was somewhat above normal during the last half. Only a few stations in the northeastern and southwestern parts of the state reported sub-zero readings. The precipitation was light to moderate and fairly well distributed throughout the month but with somewhat more during the first half than during the last half. There was snow on the ground at many stations from the 1st to the 10th and again near the close of the month. There was much cloudy weather and sunshine was below normal. No storms of importance were reported. It was an excellent month for outdoor work and for livestock. Creeks and ponds were free of ice. Many farmers found time to mine and haul their winter supply of coal.

TEMPERATURE

The mean temperature for the state was 28.7°, or 1.9° above the 1892-1943 average for November. The mean temperature for the eastern division was 28.3°; for the middle division, 28.1°; and for the western division, 29.8°. The highest mean temperature was 32.6° at Medora, and the lowest, 25.6° at Ashley, making a range in mean temperature of 7.0°. The absolute range was 67°, from 63° at Mott on the 17th, to -4° at Edmore and Langdon on the 15th and New England on the 26th. The average daily deficiency in temperature for the state since January 1, 1943, is 0.4°.

PRECIPITATION

The average precipitation for the state was 0.44 inch, or 0.14 inch less than the 1892-1943 average for November. In the eastern division the average amount was 0.52 inch; in the middle division, 0.38 inch; and in the western division, 0.43 inch. The greatest monthly amount reported was 1.45 inches at Milnor; the least was a trace at Dunseith. The greatest amount recorded in any 24 consecutive hours was 0.66 inch at Milnor on the 6th. The accumulated excess in precipitation for the state since January 1, 1943, is 1.66 inches. The average snowfall was 4.2 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	6	3	28	6	1	1	1	1	9	...	7	1	2	1	2	...	1	3	21	21	15	19	8	5	12	2	1	7	...	
Lunar halos...	1	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Solar halos
Sleet	3	2	...	...	...	...	2	4	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Thunderstms.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.59	23	29.58	30	10.4	34	nw.	8	88	91	78	83	35	1080
Devils Lake ..	30.66	23	29.54	30	9.1	28	nw.	8	89	91	77	79	37	1147
Fargo	30.70	23	29.56	30	12.7	38	n.	8	83	85	72	78	39	1065
Williston	30.64	7	29.56	30	6.9	24	nw.	11	85	87	74	73	42	1061

† And other dates.

COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	22.3	75	-26	0.80	0.95	0.61	0.79	7.4	4	8	9	13	
1893...	22.4	74	-27	0.72	0.75	0.24	0.57	4.6	3	9	10	11	
1894...	23.1	71	-25	0.44	0.54	0.43	0.47	2.6	4	10	8	12	
1895...	20.6	76	-25	1.18	1.01	1.08	1.09	8.2	5	8	9	13	
1896...	8.1	62	-32	2.06	2.47	2.17	2.23	21.7	9	7	7	15	
1897...	20.0	86	-28	0.27	0.33	0.36	0.32	2.8	3	12	9	9	
1898...	23.0	69	-30	0.42	0.30	0.30	0.34	3.1	3	13	8	9	
1899...	36.0	68	-2	0.26	0.51	0.16	0.31	1.0	2	15	4	11	
1900...	20.4	64	-29	0.28	0.29	0.40	0.32	5.2	5	14	7	9	
1901...	26.8	70	-7	0.10	0.09	0.19	0.13	1.6	1	15	3	7	
1902...	29.6	69	-12	0.25	0.11	0.36	0.24	1.9	1	13	6	13	
1903...	25.3	78	-20	0.27	0.22	0.28	0.26	2.5	2	13	4	13	
1904...	35.7	80	-10	0.10	0.09	0.07	0.09	0.7	1	18	5	7	
1905...	31.6	88	-38	1.66	1.54	0.89	1.36	11.0	9	7	13	10	
1906...	23.8	68	-16	1.90	1.34	1.23	1.49	10.2	7	10	7	13	
1907...	30.2	85	-15	0.08	0.10	0.05	0.08	0.7	1	16	8	6	
1908...	31.1	75	-15	1.10	0.91	0.80	0.94	8.2	4	12	8	10	
1909...	29.4	88	-23	0.68	0.31	0.44	0.48	4.6	3	11	9	10	
1910...	23.9	68	-23	0.34	0.44	0.43	0.40	3.2	2	8	10	12	
1911...	16.7	58	-33	0.70	0.60	0.63	0.64	7.1	6	12	8	10	
1912...	31.8	70	-1	0.09	0.06	0.06	0.07	0.5	1	14	9	7	
1913...	34.1	77	-2	0.21	0.23	0.21	0.22	1.6	2	15	8	7	
1914...	30.7	83	-30	0.45	0.31	0.23	0.33	2.6	2	13	10	7	
1915...	28.1	71	-10	0.81	0.83	1.21	0.95	3.7	4	10	10	10	
1916...	28.8	75	-18	0.10	0.25	0.46	0.27	1.7	2	16	8	6	
1917...	36.8	77	-7	0.20	0.13	0.05	0.13	1.4	1	16	6	8	
1918...	28.9	71	-18	1.31	1.09	0.49	0.96	5.3	4	13	6	11	
1919...	15.6	57	-36	1.88	0.96	0.62	1.15	11.8	5	11	8	11	
1920...	28.0	65	-14	0.55	0.33	0.14	0.34	2.1	3	10	9	11	
1921...	21.0	69	-30	0.52	0.71	0.83	0.69	6.3	5	7	8	15	
1922...	31.8	65	-8	2.97	2.26	1.50	2.24	6.3	6	7	7	16	
1923...	36.5	72	-5	0.58	0.45	0.39	0.47	0.6	3	13	8	9	
1924...	27.6	69	-15	0.19	0.17	0.17	0.18	1.9	2	11	9	10	
1925...	28.8	69	-17	0.42	0.17	0.13	0.24	1.3	2	14	8	8	
1926...	21.5	68	-23	0.72	0.54	0.60	0.62	6.2	5	6	7	17	
1927...	20.7	59	-24	0.71	0.72	0.65	0.69	7.1	6	7	8	15	
1928...	31.0	70	-11	1.08	0.28	0.09	0.48	0.2	1	15	8	7	
1929...	24.8	70	-21	0.57	0.46	0.56	0.53	5.2	5	9	8	13	
1930...	29.4	72	-21	1.56	0.62	0.43	0.87	6.2	5	13	7	10	
1931...	30.3	78	-10	0.98	0.40	0.27	0.55	5.0	3	13	7	10	
1932...	25.2	70	-17	0.70	0.38	0.45	0.51	4.6	4	10	10	10	
1933...	28.3	78	-15	0.81	0.58	0.56	0.65	6.6	5	9	8	13	
1934...	33.9	73	-1	0.51	0.22	0.10	0.28	1.0	3	13	7	10	
1935...	17.2	57	-25	0.70	0.79	0.69	0.73	8.1	6	8	8	14	
1936...	28.0	69	-28	0.37	0.33	0.31	0.34	4.0	4	13	8	9	
1937...	25.2	73	-25	0.51	0.40	0.33	0.41	3.5	4	10	7	13	
1938...	23.8	75	-21	0.63	0.94	1.04	0.87	7.9	6	8	10	12	
1939...	34.9	74	-4	0.04	0.02	0.02	0.03	T.	1	19	6	5	
1940...	22.0	59	-28	0.62	0.62	0.53	0.59	7.1	6	8	8	14	
1941...	30.5	69	-17	0.26	0.48	0.46	0.40	3.6	5	9	8	13	
1942...	28.0	73	-14	0.22	0.13	0.18	0.18	1.5	3	10	10	10	
1943...	28.7	63	-4	0.52	0.38	0.43	0.44	4.2	4	8	8	14	
Period	26.8	88	-38	0.68	0.56	0.49	0.58	4.6	4	11	8	11	

Climatological Data for November 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Casselton	Cass	934	47	30.2	+3.2	58	17	6	15	0.12	-0.51	0.07	1	0.9	4	7	12	11	n.	C. Hayford.
Cavalier	Pembina	894	33	27.4		51	17	5	15	0.83	+0.04	0.45	1	5.1	4	2	6	22	nw.	City Light & Power Co.
Colgate	Steele	1,180	10							0.22		0.13	7	0.8	2					O. M. Jensen.
Cooperstown	Griggs	1,428	46	29.3	+2.0	58	17	2	15	0.20	-0.48	0.15	25	0.4	2	8	3	19	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	13							0.34	-0.18	0.16	24	1.9	3	14	7	9	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	26.9	+2.4	54	17	3	27	0.19	-0.53	0.07	4	3.0	3	3	8	19	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	42	28.8	-0.5	54	18	10	15	0.60	+0.14	0.31	24-25	6.9	2	4	15	11	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	19	25.2	+0.6	51	17	4	15	0.48	-0.22	0.22	1	7.5	3	10	7	13	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	29.2	+0.8	54	17+	9	26	0.63	+0.01	0.29	6	5.6	8	9	5	16	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	16	29.6	+2.5	53	17	9	15	0.15	-0.75	0.07	1	1.3	5	8	4	18	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	50	29.8	+1.2	54	18	10	15	0.66	+0.04	0.35	6	6.0	3	14	5	11	nw.	Helge Dysete.
Fullerton	Dickey	1,439	45	29.6	+0.6	53	17	9	16	0.87	+0.01	0.37	6	6.6	6	4	13	13	nw.	F. O. Alin.
Grafton	Walsh	827	51	29.2	+4.2	50	18	6	15	0.78	+0.04	0.36	1	3.5	4	2	13	15	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	52	27.4	+1.6	50	17+	4	15	0.49	-0.33	0.22	1+	3.0	5	4	11	15	nw.	University of N. Dak.
Grand Forks Apt. 2 1/2 mi. W	Grand Forks	833	3	27.2		50	17+	4	15	0.21		0.09	24-25	1.0	4	4	11	15	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	14	29.1	+0.2	58	18	9	14+	0.64	-0.05	0.22	7	7.4	5	8	4	18	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	51	25.8	+5.1	44	16+	3	15	0.15	-0.60	0.15	1	2.0	1	6	9	15	nw.	A. E. Prior.
Hillsboro	Trails	901	43	29.6	+2.3	52	17	8	15	0.45	-0.37	0.15	1	1.0	6	7	11	12	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	51	29.4	+2.1	56	17	9	15	0.36	-0.32	0.24	25	2.6	4	10	3	17	nw.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE.	Stutsman	1,491	3	27.4		57	17	6	15	0.43		0.29	24-25	4.0	6	6	6	18	n.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	4	28.6		60	17	5	27	0.45		0.28	24-25	4.0	3	11	4	15	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	47	26.2	+2.5	48	18	4	15	0.57	-0.25	0.25	1	3.6	5	5	11	14	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	50	27.8	+2.0	53	17	2	15	0.91	+0.00	0.38	25	5.2	4	7	6	17	nw.	W. L. Goodson.
Lisbon	Ransom	1,091	39	29.9	+1.1	56	18	8	15	0.91	+0.25	0.55	6+	9.1	5	8	2	20	nw.	J. O. Halverson.
Mayville	Trails	975	47	29.9	+2.1	52	18	5	14	0.64	-0.05	0.55	2	T.	2	10	7	13	n.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	21	26.2	-0.4	56	17	1	15	0.60	+0.08	0.30	1	5.2	3	8	7	15	nw.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	32																	J. G. Carlson.
McViney	Nelson	1,467	13			50	17			0.66		0.36	24-25	6.0	3	2	19	9	nw.	A. M. Casad.
Millnor	Sargent	1,117	4	28.8		50	17	8	15+	1.45	+0.81	0.66	6	3.0	3	16	10	4	nw.	E. W. Wilson.
Oakes	Dickey	1,318	14	27.5	-1.1	54	17	8	16	0.57	+0.08	0.20	5-6	5.3	5	10	2	18	nw.	F. H. Murray.
Park River	Walsh	998	39	26.2	-0.8	48	17	0	15	0.64	-0.05	0.43	1	5.2	3	13	5	12	nw.	Martin Severson.
Pembina, 2 1/2 miles N	Pembina	789	69																	S. W. Douglas.
Pembina Airport, 1 mile S.	Pembina	795	4	26.3	+2.9	48	11+	5	13+	0.27	-0.54	0.15	24-25	1.3	4	1	10	19	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	13							0.40	-0.08	0.30	24	3.0	3	7	12	11	nw.	T. M. Rykken.
Sharon	Steele	1,516	19	27.4	+2.7	55	17	3	15	0.46	-0.30	0.25	24-25	5.0	5	4	12	14	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,245	37	30.2	+2.2	55	17	9	15	0.48	-0.21	0.21	1	2.2	5	11	7	12	nw.	I. C. Robertson.
Walhpeton	Richland	962	51	30.0	+1.0	50	18+	7	15	0.36	-0.40	0.15	6	5.0	6	4	12	14	nw.	W. J. Cavanaugh.
Average for Eastern Division				28.8	+1.5	60	17	4	15	0.52	-0.16	0.66	6	3.8	4	7	8	15	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	47	25.6	-2.4	47	18	4	26	0.44	-0.18	0.23	24-25	6.3	6	1	7	22	nw.	U. S. Airway Comm. Sta.
Bu'ah	Merced	1,797	29							0.58	+0.20	0.43	5-6	5.7	5	13	6	11	nw.	Knife Rvr Coal Mng. Co.
Bisbee	Towner	1,601	40	28.3	+1.9	55	18	0	15	0.50	-0.02	0.32	4	3.0	2	7	5	18	ne.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	30.4	+1.9	57	17	13	26	0.75	+0.26	0.57	5-6	7.4	5	6	7	17	nw.	U. S. Weather Bureau.
Bismarck Airport, 2 1/2 mi. SE.	Burleigh	1,650	4	29.0	+2.5	54	17	10	26	0.58	+0.01	0.45	5-6	5.6	6	6	7	17	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	51	26.6	+3.0	54	15	5	27	0.19	-0.30	0.08	1	1.5	3	18	4	8	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	17	28.8	+2.3	52	17	5	27	0.21	-0.39	0.15	5	2.0	2	4	6	20	nw.	R. L. Williams.
Carrington	Foster	1,579	45	26.6	-0.7	60	17	4	16	0.47	-0.11	0.28	1	1.9	4	9	8	13	w.	Soo Line Agent.
Carson, 2 1/2 miles SW	Grant	2,500	31	29.2	-0.6	54	16	8	26	0.44	-0.13	0.35	6	5.5	3	8	7	15	nw.	J. W. Evans.
Center	Oliver	2,109	5	28.9		55	17	5	27	0.92		0.32	1	12.2	6	6	9	15	nw.	Fred L. Heinz.
Drake	McHenry	1,634	14	28.4	+2.5	59	17	6	27	0.35	-0.01	0.28	1	3.1	3	9	1	20	w.	H. G. Kringen.
Dunseith, 2 miles NNE	Rosette	1,682	47	26.4	+2.3	50	16+	3	15	T.	-0.55	T.	1+	T.	0	9	10	11	nw.	Hubert Downs.
Eckman	Bottineau	1,500	38	28.2	+2.8	57	17	7	21	0.18	-0.29	0.10	1	2.0	2	7	10	13	se.	E. R. Sherman.
Fessenden	Wells	1,610	31	27.9	+1.3	58	17	5	27	0.24	-0.45	0.10	25	3.0	3	12	9	9	n.	John V. Zuber.
Fort Yates	Sioux	1,670	43	30.1	+0.1	56	17	2	26	0.40	-0.10	0.26	5	5.0	2	12	10	8	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,657	22	29.0	+3.4	55	17	8	27	0.20	-0.47	0.09	5	0.4	4	5	9	16	nw.	E. C. Bierbaum.
Gackle	Logan	1,951	13	27.4		52	17	10	15	0.80	+0.31	0.30	5-6	6.0	3	9	4	17	n.	Jack Dixon.
Garrison	McLean	1,125	66	28.9	+2.4	54	17	9	26+	0.77	+0.32	0.63	5-6	8.4	4	6	9	15	w.	Mae H. Vorachek.
Granville	McHenry	1,504	36	28.2	+1.8	44	17+	5	27	0.24	-0.32	0.21	5	3.2	2	12	7	11	nw.	Fred Roble.
Hansboro	Towner	1,597	35	25.7	+2.2	50	17	0	15	0.25	-0.34	0.22	4	3.5	2	6	13	11	nw.	W. E. Disher.
Harvey	Wells	1,596	40							0.17	-0.46	0.09	6	3.5	3	2	5	23	n.	Orville Hoksche.
Leeds	Benson	1,515	3	27.2		55	17	2	15	0.15		0.10	7	1.0	2	1	12	17	n.	John Duhaage.
Linton	Emmons	1,711	26	29.0	+0.2	57	17	3	26	0.62	+0.12	0.32	5	6.0	4	8	6	16	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	28	27.7	+1.5	56	17	2	27	0.14	-0.32	0.09	1	1.7	3	4	11	15	nw.	A. T. Felland.
Mandan, 1 1/2 miles SW	Morton	1,750	29	29.6	+0.7	56	17	13	26	0.64	+0.13	0.56	6	8.0	3	11	2	17	sw.	No. Gt. Plains Field Sta.
Max	McLean	2,093	14	28.4	+2.7	58	17	6	27	0.33	-0.11	0.19	5	5.0	2	9	6	15	nw.	A. W. Rice.
McClusky	Sheridan	1,943	2																	

Climatological Data for November 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Almont, 7 miles WSW	Morton	2,300	1	29.0	.....	53	17	12	26	0.44	.....	0.29	5-6	4.7	4	8	7	15	nw.	Hogan Ramsland.
Alpha, 1 mile S.	Golden Valley	16	16	31.4	+0.8	58	17	7	27	0.28	-0.11	0.17	6	2.6	4	13	9	8	nw.	H. A. Bury.
Amidon	Slope	2,908	20	31.4	+0.8	58	17	7	27	0.16	-0.24	0.08	1	2.5	3	7	15	8	sw.	A. M. Nesseth.
Beach	Golden Valley	2,759	37	29.5	-1.2	54	15	3	26	0.59	+0.11	0.35	6	5.9	4	11	16	3	w.	Mrs. Belle Callahan.
Bowbells	Burke	1,953	14	27.9	+2.7	54	17	2	27	0.49	-0.01	0.25	1	4.2	6	9	2	19	w.	Charles Kaulman.
Bowman	Bowman	2,872	28	29.5	-1.0	58	17	5	27	0.24	-0.15	0.15	6	2.9	3	12	8	10	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	34	28.8	+2.3	57	17	4	27	0.32	-0.28	0.14	24-25	4.5	3	10	5	15	sw.	Veruon V. Nichols.
Dickinson, 1 mile NW	Stark	2,543	50	28.8	+0.6	58	17	3	27	0.36	-0.11	0.17	24-25	4.3	7	13	6	11	nw.	Leroy Moomaw.
Dickinson Airt., 5 1/2 mi. S.	Stark	2,577	3	30.0	.....	58	17	9	26 1/2	0.10	.....	0.05	6	1.9	3	7	7	16	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	43	29.8	+1.9	58	17	10	27	0.57	+0.11	0.38	6	7.2	3	9	6	15	nw.	O. T. Evenson.
Elbowoods	McLean	2,082	49	30.8	+2.4	59	17	4	26	0.80	+0.43	0.23	5	9.6	6	12	7	10	nw.	H. W. Case.
Epping	Williams	2,224	32	30.1	+3.8	55	18	6	27	0.12	-0.32	0.12	5	1.4	1	15	5	10	se.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	6	.....	.....	.....	.....	.....	.....	0.26	-0.12	0.12	6	1.7	3	7	9	14	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	24	30.4	.....	57	17	6	27	0.52	+0.03	0.16	24-25	3.9	6	10	7	13	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	3	29.4	.....	56	16 1/2	3	27	0.58	.....	0.37	5-6	7.3	5	5	12	13	w.	U. S. Airway Comm. Sta.
Grenora 1/2	Williams	2,114	34	31.0	+4.9	55	17	10	26	0.10	-0.45	0.05	5 1/2	1.0	2	8	11	11	se.	John S. Sorenson.
Halliday	Dunn	2,073	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Gerhart.
Hettinger	Adams	2,675	35	31.1	-0.3	57	17	2	2	0.11	-0.31	0.06	25	1.1	2	15	12	3	nw.	A. W. Anderson.
Kenmare	Ward	1,799	11	29.4	+3.1	52	17	8	27	0.68	+0.13	0.45	1	6.8	4	10	3	17	nw.	Thos. E. Eckberg.
Marmarth	Slope	2,714	33	31.5	+0.6	58	17	2	27	0.48	+0.09	0.24	6	4.1	3	11	5	14	nw.	S. P. Grane.
Medora	Billings	2,271	27	32.6	.....	61	17	5	26	0.08	-0.42	0.08	25	1.0	1	14	6	10	w.	Harry Roberts.
Mott	Hettinger	2,424	35	31.2	+1.9	63	17	5	26	0.52	+0.04	0.29	6	5.6	5	19	2	9	nw.	P. G. Wick.
New England	Hettinger	2,621	48	29.7	+0.3	61	17	4	26	0.73	+0.29	0.26	25-26	8.5	4	12	10	8	uw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	2	2	30.3	.....	57	17	2	27	0.26	.....	0.16	25	2.7	4	16	3	11	w.	Peter F. Fieck.
Parshall	Mountain	1,929	27	28.4	+2.9	54	17	3	27	0.37	.....	0.00	5	5.5	5	6	16	8	nw.	C. E. Schubert.
Portal	Burke	1,951	37	27.8	+2.8	53	17	6	27	0.50	-0.05	0.25	6	7.0	4	8	5	17	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	37	27.8	+2.4	43	18	12	26	1.04	+0.55	0.25	3	14.0	5	9	13	8	w.	Geo. B. Gee.
Richardton, 1 1/2 miles N.	Stark	2,467	26	29.9	+1.2	56	17	11	26	0.34	-0.14	0.14	25	5.4	3	12	4	14	se.	Assumption Abbey.
Sanish	Mountain	1,835	17	29.4	+1.4	56	17	7	27	0.54	+0.04	0.40	4-5	7.2	4	8	5	17	nw.	H. J. Bugge.
Stanley	Mountain	2,258	5	27.0	.....	50	17	3	27	0.48	.....	0.23	4-5	4.5	3	10	9	11	nw.	Leroy Edwards.
Tioga	Williams	2,279	14	.....	.....	.....	.....	.....	.....	0.63	+0.19	0.26	1	3.4	5	1	22	7	nw.	H. Francis Cannon.
Trotters	Golden Valley	1,864	3	29.2	.....	55	16 1/2	7	28	0.30	.....	0.20	4-5	3.0	2	15	2	13	nw.	Walter Grunewald.
Van Hook	Mountain	2,084	29	31.2	+2.7	60	17	12	27	0.41	-0.09	0.17	5	3.7	5	10	7	13	w.	V. L. Snyder.
Watford City	McKenzie	2,258	15	.....	.....	57	16	10	26	0.46	+0.11	0.20	1	5.4	3	13	6	11	sw.	J. C. Zeller.
Wildrose	Williams	1,878	63	31.8	+4.6	57	16	10	26	0.38	-0.20	0.21	5-6	2.9	6	8	7	15	se.	Fred E. Maucher.
Williston	Williams	1,878	63	31.8	+4.6	57	16	10	26	0.38	-0.20	0.21	5-6	2.9	6	8	7	15	se.	U. S. Weather Bureau.
Average for Western Division				29.8	+1.8	63	17	4	26	0.43	-0.06	0.45	1	4.8	4	10	8	12	nw.	
Average for the State				28.7	+1.9	63	17	4	15 1/2	0.44	-0.14	0.66	6	4.2	4	8	8	14	nw.	

Daily Temperatures for November 1943

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley 3	Maximum..	34	36	40	40	31	30	22	28	30	28	40	23	25	34	27	39	43	47	39	41	32	25	35	33	33	26	23	31	33	36	33.1	
	Minimum..	29	17	15	22	26	20	16	14	18	15	24	17	13	18	15	17	28	25	18	20	18	19	19	26	19	4	11	11	20	11	18.2	
Bismarck Airport 1	Maximum..	34	37	44	39	32	31	23	28	32	32	43	35	30	38	31	49	54	48	36	42	36	29	41	37	34	28	27	34	42	41	36.2	
	Minimum..	31	20	18	24	28	22	18	19	22	22	29	22	21	22	22	21	29	27	21	23	17	21	24	31	18	10	12	20	22	21	21.9	
Bottineau 5	Maximum..	33	42	43	42	33	30	30	32	33	46	41	32	30	26	54	53	51	46	41	45	29	35	35	36	29	30	27	42	38	35	37.4	
	Minimum..	26	28	11	20	26	27	17	16	18	14	25	21	14	6	12	8	22	17	15	14	7	17	20	22	10	8	5	6	6	18	15.9	
Carson	Maximum..	35	37	40	48	35	35	27	35	34	43	40	30	38	39	54	47	43	44	38	38	38	42	33	35	28	33	33	44	44	.....	37.9
	Minimum..	27	14	15	21	28	25	16	16	16	22	25	24	15	18	24	21	28	20	25	16	21	21	29	26	20	8	15	23	19	20	20.6	
Crosby 5	Maximum..	43	40	44	42	37	33	29	27	31	39	39	38	31	31	31	48	57	48	40	38	42	36	33	33	19	27	38	38	35	.....	36.7
	Minimum..	29	21	22	27	30	25	22	23	14	9	29	22	22	22	26	21	28	30	15	21	13	19	23	29	17	10	4	19	17	18	20.9	
Devils Lake 1	Maximum..	34	34	43	33	30	29	24	31	32	30	48	37	22	36	21	50	54	48	38	38	25	28	38	32	23	23	29	36	40	.....	34.0
	Minimum..	31	24	23	28	26	24	21	20	22	18	26	18	12	15	4	15	27	26	18	22	19	21	24	24	17	10	3	13	25	20	19.8	
Dickinson Airport 3	Maximum..	33	34	41	38	36	34	22	27	36	32	45	41	28	44	31	57	58	45	43	42	39	42	37	41	30	24	34	32	42	43	37.8	
	Minimum..	28	15	26	30	30	22	19	19	19	25	31	25	19	23	27	25	38	24	23	24	19	21	26	25	12	9	9	14	19	21	22.2	
Dunn Center 5	Maximum..	35	35	44	38	35	31	27	27	34	35	46	42	35	40	34	55	58	48	37	41	40	42	38	41	35	26	29	33	43	43	38.3	
	Minimum..	28	15	24	25	30	25	20	19	13	25	27	21	17	21	27	20	36	33	18	21	12	20	26	24	15	12	10	22	16	15	21.3	
Fargo Airport 1	Maximum..	38	37	47	38	36	33	30	34	35	33	48	37	25	29	25	42	53	51	38	42	31	30	40	36	34	26	23	30	41	41	36.2	
	Minimum..	34	32	28	32	32	28	26	21	25	23	22	23	13	18	9	13	24	30	23	22	19	26	25	22	24	14	13	23	25	21	23.0	
Fessenden	Maximum..	33	33	41	37	31	30	28	33	30	38	47	33	29	36	27	53	58	47	34	40	29	31	40	35	35	23	25	30	41	42	35.8	
	Minimum..	30	29	22	26	28	26	18	18	21	11	23	23	14	19	12	14	27	32	18	20	40	29	31	40	35	35	23	25	30	41	42	20.0
Fullerton	Maximum..	35	36	42	44	37	33	28	30	32	31	44	39	31	34	32	40	53	47	43	45	35	28	40	36	35	30	24	32	38	43	36.6	
	Minimum..	32	31	20	33	30	23	19	22	23	19	31	16	16	11	9	32	38	20	47	43	24	17	22	19	21	29	12	16	23	22	22.5	
Garrison 3	Maximum..	34	42	43	34	32	32	22	28	30	31	4	36	32	36	31	52	54	44	36	41	32	33	41	39	31	30	26	34	41	44	36.1	
	Minimum..	29	24	22	27	27	21	18	16	22	25	27	28	21	21	23	20	33	26	19	21	15	20	25	28	17	9	9	25	19	20	21.7	
Golva 2	Maximum..	31	38	43	39	45	32	25	30	40	37	47	46	33	42	36	56	56	45	50	42	42	44	34	38	30	24	37	33	43	46	39.5	
	Minimum..	10	1	26	28	30	22	21	22	20	30	21	16	21	26	22	38	17	20	23	18	17	25	20	12	12	3	17	24	17	19	19.3	
Grafton	Maximum..	40	39	42	40	38	37	41	34	38	35	49	48	30	30	29	40	48	50	42	41	34	28	38	32	34	30	22	31	34	38	37.1	
	Minimum..	32	32	25	28	31	29	25	20	22	17	21	23	10	13	6	13	21	31	23	22	21	23	25	20	28	14	11	18	18	20	21.4	
Grand Forks Airport 3	Maximum..	37	36	42	37	36	31	29	34	35	30	48	32	24	30	21	42	50	50	39	39	26	28	40	34	32	20	21	30	34	42	34.3	
	Minimum..	31	31	26	30	30	28	23	21	22	17	22	19	9	12	4	15	20	29	20	20	18	23	22	21	16	8	11	20	23	12	20.1	
Jamestown Airport 3	Maximum..	35	36	47	39	32	32	25	31	32	31	47	38	30	35	28	48	57	54	39	44	27	26	40	34	32	27	24	32	35	38	35.8	
	Minimum..	31	21	18	25	28	24	20	20	21	20	22	22	13	15	6	12	25	19	19	20	13	21	16	22	14	10	13	19	22	16	19.1	
Kenmare 5	Maximum..	35	38	45	32	33	30	26	28	30	41	43	39	31	33	30	50	52	42	40	43	39	41	37	36	30	30	30	34	43	36	36.6	
	Minimum..	28	29	26	23	27	26	20	20	10	12	22	21	21	20	21	27	36	21	24	14	21	25	25	27	15	8	18	25	23	.....	22.3
Langdon	Maximum..	35	36	41	37	32	31	27	34	37	38	47	35	29	33	26	45	46	48	44	41	28	28	36	33	33	25	20	29	35	39	34.7	
	Minimum..	30	28	15	26	27	24	20	18	8	20	19	4	10	4	10	19	28	16	20	15	18	20	23	24	6	10	17	22	16	.....	17.6
Marmarth	Maximum..	33	49	47	43	47	37	27	28	44	38	50	45	36	42	41	53	58	48	50	43	38	42	36	41	43	25	37	37	43	48	41.3	
	Minimum..	30	6	18	30	29	27	24	20	26	20	30	20	32	30	29	22	20	20	19	30	29	26	19	23	3	2	16	14	16	.....	21.7
Minot Airport 3	Maximum..	34	38	45	34	31	29	22	28	30	31	42	35	27	34	28	49	53	44	39	39	37	37	42	36	31	26	35	33	40	39	35.6	
	Minimum..	30	28	26	26	27	20	14	13	22	19	30	24	15	23	19	22	32	26	21	19	13	19	25	26	19	9	10	22	24	23	21.5	
Mott	Maximum..	36	37	45	50	36	33	28	28	37	37	49	45	36	41	39	53	63	49	47	43	41	41	36	45	35	28	37	35	45	48	40.4	
	Minimum..	28	13	19	28	30	26	18	18	22	26	26	25	20	22	28	28	22	29	20	22	16	22	26	26	26	5	12	27	14	18	22.1	
Pembina Airport 3	Maximum..	36	34	37	36	35	32	27	33	40	30	48	37	22	32	19	37	46	48	37	38	24	28	31	32	32	26	20	30	35	34	38.4	
	Minimum..	31	30	25	26	31	24	22	20	21	12	24	15	5	9	5	17	20	28	19	19	19	22	21	19	20	7	6	20	23	16	19.2	
Sharon	Maximum..	33	33	43	35	31	29	25	31	32	29	46	36	27	33	27	48	55	51	43	40	31	24	38	32	32	24	19	29	31	38	34.2	
	Minimum..	31	30	18	30	27	25	21	17	23	15	20	11	15	3	10	22	36	21	25	18	20	24	22	24	14	13	19	24	16	.....	20.6
Steele	Maximum..	34	37	39	38	33	30	23	29	28	30	42	35	31	35	35	42	53	49	40	41	37	29	40	35	31	28	25	32	39	42	35.4	
	Minimum..	29	26	12	23	26	23	15	13	15	20	21	24	18	14	16	16	22	30	13	17	13	15	20	27	25	3	7	14	19	15	18.4	
Valley City	Maximum..	37	36	47	39	35	34	34	33	34	33	47	42	32	33	34	45	55	53	45	42	36	29	37	34	34	31	25	32	36	41	37.5	
	Minimum..	32	33	22	31	30	29	24	19	25	22	20	28	15	12	9	10	27	40	23	24	20	21	23	24	30	12	18	21	28	19	23.0	
Wahpeton	Maximum..	39	38	47	47	38	37	31	29	33	32	42	41	33	28	31	38	48	50	50	44	35	30	39	38	34	32	22	28	40	44	37.3	
	Minimum..	32	33	27	31	27	29	26	19	25	21	19	29	12	15	7	9	25	34	20	20												

Daily Precipitation for November 1943

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Casselton	Red.	.07	T.		T.		.02	.02	.01			T.			T.												T.						0.12
Cooperstown	Sheyenne				.05		T.	T.	T.						T.											.15							0.20
Courtenay	James	.10																															0.34
Devils Lake 1†	Devils Lake	.06	T.		.07		T.	T.	T.			T.		T.	T.	T.			T.						.16	.08	T.	T.	T.				0.19
Edgeley	James					T.	.29								T.	T.										.31							0.60
Edmore	Devils Lake	.22			.18		T.	T.	T.						T.	T.										T.	.08						0.48
Ellendale	James	.05	.02		.03		.29	.06							.01	T.	T.									.15	.02	T.	T.	T.			0.63
Fargo 1†	Red.	.07	T.		T.		.02	.02	.01			T.			T.	T.	T.								T.	.03							0.15
Forman	Sheyenne	.06					.35	.25							T.	T.																	0.66
Fullerton	James				.12	.03	.37	.12	.04						T.											T.	.19						0.87
Grafton	Red.	.36			.06		T.							T.	T.	T.	T.									.36	T.						0.78
Grand Forks Airport 3	do	.08	T.		.04		T.	T.					T.		T.	T.										.04	.05	T.	T.				0.21
Hankinson 2	do	.20					.12	.22	.08																		.02						0.64
Hannah	Pembina	.15			T.	T.	T.	T.							T.																		0.15
Hillsboro	Red.	.15	.05		.06		.07	.02							T.												.10						0.45
Jamestown Airport 3	James	.06				.01	.03	.04	T.			T.			T.	T.										.12	.17	T.	T.	T.			0.43
Langdon	Pembina	.25			.02											.05											.22						0.57
Larimore	Red.	.33			.17		T.								T.											.03	.38						0.91
Lisbon	Sheyenne	.12			.04		.35	.35							T.												.05	T.					0.91
Mayville	Red.		.55		.09		T.	T.																			T.						0.64
McHenry	James	.30			.05		T.	T.							T.												.25						0.60
McLeod	Sheyenne																																
Oakes 2	James	.18					.20	.13	.02																		.04						0.57
Park River	Red.	.43	T.		.02		T.	T.					T.		T.												.19						0.64
Pembina Airport 3	do	.11	T.				T.					T.	T.	T.	.01	T.	T.										.07	.08	T.	T.	T.		0.27
Petersburg	do	.08			.02	T.																						.30					0.40
Sturton	do	.11			.05		T.	.01	T.						T.													.25					0.46
Valley City	Sheyenne	.21					.02	.09							T.												.15	.01					0.48
Wanpeton	Red.	.08	T.		T.		.15	.02					T.	T.		.02	.01											.08	T.				0.36
Middle Division																																	
Ashley 3	Missouri	.06			T.	.10	.04	T.	.01						T.											.19	.04						0.44
Bisbee	Devils Lake				.32																												0.50
Bismarck 1†	Missouri	.04	T.	T.	.01	.36	.09	.01		T.	T.				T.	T.								T.	T.		.07						0.58
Bottineau 2	Mouse	.08	.05		.06		T.	T.	T.	T.					T.	T.																	0.19
Butte	do	.06				.15	T.	T.	T.	T.					T.	T.																	0.21
Carrington 2	James	.28						.02																			.15	.02					0.47
Carson	Heart				.16	.19																						.09					0.44
Center	Missouri	.32		T.		.18	.23	.03																			.08			.08			0.92
Drake 2	Mouse	.28	.02			.05	T.																					T.					0.35
Dunseith	do	T.					T.	T.							T.	T.																	T
Eckman	do	.10			T.	.08									T.	T.	T.																0.18
Fessenden	James	.09				T.	.05									T.												.10					0.24
Fort Yates	Missouri				.26																							.14					0.40
Foxholm	Mouse	.03				.09	.02																					.06					0.20
Gackle	James				T.	.30	.20	T.																				.30					0.80
Garrison 3	Missouri	.07		T.		.58	.05	T.																				.07					0.77
Granville	Mouse	.03	T.		T.	.21	T.																										0.24
Hansboro	Devils Lake	.03			.22			T.																									0.25
Linton	Missouri	.05	T.			.32	.15	T.																				.10					0.62
Maddock	Sheyenne	.09			.02		T.	T.								T.												.03					0.14
Mandan 2	Missouri	.04	T.				.56	T.								T.												.04	T.				0.64
Max 2	do	.14	T.																														0.33
McClusky	do				T.	.19	T.	T.																									0.23
Minot Airport 3	Mouse	.01	T.	T.	T.	.37	.01	T.		T.						T.												.04					0.43
Mo'ali	do	.23			T.	.26	.06	T.								.03												.02					0.60
Napoleon 2	Missouri					T.	.15																										0.33
New Salem	Heart	.09					.25	T.																				.18					0.40
Pettibone	James	.08				T.	T.	T.																				.06					0.13
Rolla	Devils Lake	.11			.33		T.	T.	.01						T.	T.																	

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

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NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LII BISMARCK, N. D., DECEMBER 1943 No. 12

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GENERAL SUMMARY

December 1943 was warm and dry. It was the second driest December since 1892 and the driest since 1913. The drought condition has persisted now over the greater portion of North Dakota since September, with a deficiency of 1.78 inches during this 4-month period. This deficiency during the fall and winter months is not as serious for the following crop as in the states farther south where more winter grains are sown. Only four other Decembers were warmer. Sunshine during the month was 60% of the possible as compared with 32% in December 1942 and the normal of 45%. Outdoor activities continued with little yard feeding of livestock necessary due to the weather. Rain, in amounts up to 0.10 inch, occurred on the 25th. The Missouri River froze over on the 15th at Bismarck. This is unusually late in the season for closing, and open water was reported still later in the month in the Williston-Sanish district. Some flooding occurred locally along the Missouri on the 20th-22d, causing some damage to haystacks. By the close of the month practically all the grain previously stored on the ground was in elevators.

TEMPERATURE

The mean temperature for the state was 21.5°, or 8.1° above the 1892-1943 average for December. The mean temperature for the eastern division was 20.0°; for the middle division, 21.3°; and for the western division, 23.2°. The highest mean temperature was 25.6° at Marmarth, and the lowest, 15.0° at Pembina, making a range in mean temperature of 10.6°. The absolute range was 87°, from 65° at Center on the 3d, to -22° at Langdon on the 14th. The average daily excess in temperature for the state since January 1, 1943, is 3.7°.

PRECIPITATION

The average precipitation for the state was 0.12 inch, or 0.36 inch less than the 1892-1943 average for December. In the eastern division the average amount was 0.15 inch; in the middle division, 0.12 inch; and in the western division, 0.10 inch. The greatest monthly amount reported was 0.41 inch at Langdon; the least was a trace at 15 stations. The greatest amount recorded in any 24 consecutive hours was 0.35 inch at Bisbee on the 7-8th. The accumulated excess in precipitation for the state since January 1, 1943, is 1.31 inches. The average snowfall was 1.0 inch.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	2	1		7	13	1	1				1				1					1	1			1	1					3	
Lunar halos ..	1				2	1	1			2										1											
Solar halos ..	1				1					1										1											
Sleet	1	1	2				1	2												1						1	6				
Thunderstorms ..																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)			Date	Wind (true velocities)			Date	Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest		Average hourly velocity	Maximum velocity	Direction		12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.71	14	29.46	7	9.8	32	w.	11	86	85	66	76	53	1312
Devils Lake...	30.55	14	29.40	8	9.4	29	nw.	18	89	91	72	71	70	1430
Fargo	30.66	14	29.36	8	12.9	41	nw.	1	74	77	60	67	60	1400
Williston.....	30.65	22	29.45	7	6.6	25	nw.	3	79	85	70	67	58	1297

† And other dates.

COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	7.1	60	-39	0.44	0.49	0.78	0.57	7.7	4	13	8	10
1893...	4.7	55	-36	0.71	0.83	1.02	0.85	8.4	6	11	9	11
1894...	19.1	70	-32	0.38	0.17	0.32	0.29	1.6	2	18	7	6
1895...	13.8	62	-32	0.24	0.29	0.39	0.31	2.6	3	12	9	10
1896...	16.4	53	-35	0.50	0.46	0.13	0.36	2.6	3	13	9	9
1897...	10.8	69	-35	0.24	0.21	0.21	0.22	2.2	3	12	8	11
1898...	12.1	51	-38	0.24	0.24	0.24	0.24	2.1	3	14	9	8
1899...	12.8	60	-26	0.31	0.31	0.34	0.32	3.3	3	13	7	11
1900...	17.3	58	-29	0.35	0.29	0.29	0.31	3.0	4	13	8	10
1901...	12.4	61	-43	0.72	0.74	0.75	0.74	7.2	5	10	7	14
1902...	7.8	49	-35	0.50	0.30	0.72	0.51	4.2	4	14	7	10
1903...	11.6	57	-33	0.63	0.74	0.93	0.77	7.2	6	11	7	13
1904...	14.2	55	-43	0.60	0.62	0.73	0.65	6.2	5	7	8	16
1905...	15.3	55	-34	0.21	0.16	0.12	0.16	1.6	4	16	2	13
1906...	8.4	48	-40	1.09	0.91	1.27	1.09	10.7	6	11	7	13
1907...	20.1	68	-26	0.36	0.23	0.31	0.30	3.1	3	15	7	9
1908...	14.4	62	-37	0.53	0.26	0.28	0.36	3.7	3	13	10	8
1909...	5.2	54	-42	1.88	1.10	0.86	1.28	12.1	7	9	8	14
1910...	12.9	56	-34	0.45	0.42	0.42	0.43	4.6	4	12	8	11
1911...	14.9	61	-33	0.45	0.26	0.34	0.35	4.5	4	10	8	13
1912...	18.9	72	-28	0.62	0.55	0.13	0.43	4.0	4	14	8	9
1913...	22.7	61	-21	0.05	0.12	0.01	0.06	0.3	1	18	5	7
1914...	5.4	57	-42	0.58	0.40	0.42	0.47	5.7	4	12	9	10
1915...	15.8	67	-27	0.56	0.56	0.44	0.52	5.4	5	11	9	11
1916...	2.7	61	-50	1.39	1.34	0.81	1.18	13.9	5	15	8	8
1917...	0.7	58	-41	0.51	0.64	0.61	0.59	7.4	6	9	9	13
1918...	18.5	65	-41	0.97	0.92	0.76	0.88	9.9	5	9	8	14
1919...	7.4	49	-38	0.65	0.48	0.28	0.47	4.8	3	14	9	8
1920...	15.2	59	-32	0.48	0.33	0.16	0.32	3.2	3	11	9	11
1921...	16.5	59	-33	0.52	0.33	0.38	0.41	3.9	4	14	7	10
1922...	8.5	55	-34	0.75	0.76	0.53	0.68	7.4	5	11	8	12
1923...	22.2	62	-36	0.38	0.35	0.23	0.32	3.6	3	16	8	7
1924...	2.9	58	-46	0.40	0.39	0.54	0.44	5.3	4	12	7	12
1925...	16.5	67	-38	0.24	0.30	0.30	0.28	2.6	3	12	8	11
1926...	9.2	55	-36	0.60	0.50	0.59	0.56	5.5	3	14	8	9
1927...	1.8	43	-38	0.96	0.52	0.91	0.80	8.7	5	14	7	10
1928...	20.7	57	-30	0.47	0.23	0.27	0.32	3.2	3	14	7	10
1929...	12.5	59	-38	0.68	0.88	0.88	0.81	9.9	5	12	8	11
1930...	19.9	53	-30	0.21	0.16	0.21	0.19	2.0	3	12	8	11
1931...	21.0	58	-21	0.25	0.15	0.29	0.23	2.7	2	13	8	10
1932...	12.4	60	-31	0.17	0.14	0.28	0.20	1.7	3	14	10	7
1933...	8.6	62	-33	1.09	0.79	0.83	0.90	9.7	6	9	8	14
1934...	12.6	53	-44	0.40	0.22	0.29	0.30	3.9	5	9	8	14
1935...	12.6	51	-34	0.65	0.52	0.54	0.50	5.6	5	10	7	14
1936...	15.0	59	-36	0.50	0.32	0.46	0.43	5.5	4	11	8	12
1937...	11.4	51	-33	0.62	0.51	0.49	0.54	6.5	6	10	9	12
1938...	18.2	55	-41	0.40	0.30	0.26	0.32	4.1	4	11	10	10
1939...	26.7	70	-20	0.27	0.30	0.27	0.28	2.3	4	10	10	11
1940...	19.8	59	-36	0.79	0.28	0.19	0.42	4.0	4	10	7	14
1941...	22.5	66	-20	0.15	0.17	0.14	0.15	1.8	3	10	11	10
1942...	10.9	53	-30	0.67	0.52	0.39	0.53	7.1	7	7	8	16
1943...	21.5	65	-22	0.15	0.12	0.10	0.12	1.0	2	16	9	6
Period	13.4	72	-50	0.54	0.44	0.45	0.48	5.0	4	12	8	11

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Climatological Data for December 1943

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Casselton	Cass	934	47	22.2	+9.4	48	18	-14	14	0.05	-0.49	0.05	7	0.5	1	24	5	2	s.	C. Hayford.
Cavalier	Pembina	894	33	17.3	.....	45	18	-15	14	0.34	-0.50	0.15	7-8	2.0	3	13	9	9	s.	City Light & Power Co.
Colgate	Steele	1,180	10	.....	.....	.....	.....	.....	.....	0.11	0.11	0.11	8	2.0	1	.....	.....	.....	.....	O. M. Jensen.
Cooperstown	Griggs	1,428	46	20.4	+7.4	47	18	-18	14	0.33	-0.23	0.13	26	2.8	3	19	5	7	nw.	R. J. Lockner.
Courtney	Stutsman	1,523	13	.....	.....	.....	.....	.....	.....	0.12	-0.48	0.08	7-8	1.5	2	19	7	5	sw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	46	18.8	+9.3	46	18	-16	14	0.16	-0.38	0.15	7-8	1.4	3	11	9	11	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	42	23.7	+8.7	51	18	-13	14	T.	-0.40	T.	7	T.	0	12	17	2	w.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	19	17.2	+6.7	44	37	-19	14	0.12	-0.46	0.12	7-8	2.0	1	17	6	8	sw.	Mike Davis.
Ellendale	Dickey	1,457	48	21.9	+5.6	52	18	-13	14	0.01	-0.45	0.01	27	0.1	1	20	6	5	uw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	16	19.8	+8.3	49	18	-13	14	0.10	-0.62	0.08	7-8	0.9	3	11	10	10	s.	U. S. Weather Bureau.
Foran	Sargent	1,249	50	22.4	+7.1	47	18	-14	14	T.	-0.56	T.	26	T.	0	26	4	1	s.	Helge Dyste.
Fullerton	Dickey	1,439	45	23.3	+8.1	51	18	-13	14	0.04	-0.81	0.02	7-8	0.4	2	11	12	8	s.	F. O. Alin.
Grafton	Walsh	827	51	19.6	+8.9	45	18	-14	14	0.27	-0.27	0.16	7	1.5	2	6	17	8	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	52	18.0	+7.0	46	18	-15	14	0.30	-0.30	0.16	8	4.2	4	19	8	4	nw.	University of N. Dak.
Grand Forks Airt., 2 1/2 mi. W	Grand Forks	833	3	17.4	.....	44	18	-14	14	0.22	-0.17	7-8	2.3	4	13	11	7	nw.	U. S. Airway Comm. Sta.	
Hankinson	Richland	1,068	14	21.8	+4.1	50	18	-15	14	0.04	-0.43	0.04	8	T.	1	24	2	5	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	51	16.5	+8.9	45	3	-19	14	0.23	-0.39	0.20	8	2.3	3	14	4	13	sw.	A. E. Prior.
Hillsboro	Trails	901	43	20.4	+12.4	50	18	-14	14	0.15	-0.51	0.11	7	1.2	4	16	8	7	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	51	22.2	+7.3	48	18	-13	14	0.20	-0.46	0.12	7-8	2.0	2	21	2	8	s.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	3	20.1	.....	49	18	-15	14	0.13	0.09	7	1.4	3	15	8	8	w.	U. S. Airway Comm. Sta.	
Kensal, 7 miles SW	Stutsman	1,440	4	20.7	.....	53	18	-14	14	0.20	0.12	7	3.0	2	15	10	6	nw.	U. S. Wildlife Refuge.	
Langdon, 1 mile E	Cavalier	1,615	47	17.5	+8.7	45	3	-22	14	0.41	-0.22	0.16	8-9	3.3	7	14	11	6	w.	V. Sturlaugson.
Larimore	Grand Forks	1,134	50	19.2	+7.7	45	18	-19	14	0.25	-0.32	0.13	8	2.4	3	13	9	9	sw.	W. L. Goodson.
Lisbon	Ransom	1,091	39	22.4	+7.6	51	18	-15	14	0.12	-0.36	0.12	8	1.2	1	21	1	9	nw.	J. O. Halverson.
Mayville	Trails	975	47	20.6	+7.3	50	18	-14	14	0.15	-0.39	0.09	8	1.4	4	19	4	8	s.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	21	18.0	+7.2	47	18	-19	14	0.26	-0.21	0.15	7	1.8	3	14	11	6	sw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	32	20.0	+4.9	48	31	-15	14	0.11	-0.37	0.11	26	1.1	1	16	12	3	sw.	J. G. Carlson.
McVille	Nelson	1,467	13	.....	.....	.....	.....	.....	.....	0.23	0.09	8	1.8	3	13	17	1	nw.	A. M. Casad.	
Milnor	Sargent	1,117	4	18.4	.....	43	10	-15	14	T.	-0.52	T.	26	T.	0	23	5	3	nw.	E. W. Wilson.
Oakes	Dickey	1,318	14	19.6	+3.4	50	18	-13	14	0.06	-0.35	0.06	7-8	T.	1	22	0	9	nw.	F. H. Murray.
Park River	Walsh	958	39	17.5	+6.4	43	18	-13	14	0.08	-0.35	0.08	7-8	1.0	1	23	5	3	nw.	Martin Severson.
Pembina, 2 1/2 miles N	Pembina	789	69	.....	.....	.....	.....	.....	.....	0.28	-0.36	0.13	5	2.3	3	10	12	9	nw.	S. W. Douglas.
Pembina Airt., 1 mile S.	Pembina	795	4	15.0	+8.0	43	18	-17	13	0.28	-0.36	0.13	5	2.3	3	10	12	9	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,520	13	.....	.....	.....	.....	.....	.....	0.14	-0.24	0.14	8	1.5	1	15	13	3	sw.	T. M. Rykken.
Sharon	Steele	1,516	19	18.9	+6.7	46	18	-18	14	0.17	-0.29	0.08	7	1.3	3	11	12	8	w.	Nels O. Grefshelm.
Valley City	Barnes	1,245	37	22.4	+7.9	49	18	-13	14	0.17	-0.31	0.10	7	1.7	3	20	5	6	sw.	I. C. Robertson.
Wahpeton	Richland	962	51	22.8	+7.0	50	18	-15	14	0.04	-0.42	0.04	8	T.	1	14	11	6	nw.	W. J. Cavanaugh.
Average for Eastern Division				20.0	+7.4	53	18	-22	14	0.15	-0.39	0.20	8	1.4	2	17	8	6	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	47	20.6	+5.8	48	18	-14	14	T.	-0.56	T.	7	T.	0	11	8	12	w.	U. S. Airway Comm. Sta.
Bulah	Mercer	1,797	29	.....	.....	.....	.....	.....	.....	0.17	-0.18	0.11	7	1.3	3	15	12	4	sw.	Knife Rvr Coal Mng. Co.
Bisbee	Towner	1,601	40	19.5	+9.8	48	18	-16	14	0.35	-0.07	0.35	7-8	2.0	1	16	9	6	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	69	24.5	+8.8	55	3	-9	14	0.26	-0.26	0.15	25-26	0.5	3	13	6	12	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	4	22.7	+9.9	54	3	-9	14	0.33	-0.24	0.18	25-26	0.4	4	13	6	12	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	51	18.7	+10.4	45	18	-16	14	0.09	-0.38	0.09	7-8	0.3	1	26	1	4	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	17	22.5	+7.7	51	3	-15	14	0.17	-0.31	0.15	7-8	1.5	2	16	10	5	sw.	R. L. Williams.
Carrington	Foster	1,579	45	19.8	+7.2	50	37	-16	14	0.08	-0.31	0.08	7	1.0	1	19	11	1	nw.	Soo Line Agent.
Carson, 2 1/2 miles SW	Grant	2,500	31	24.6	+8.0	55	3	-14	14	0.27	-0.24	0.22	25-26	1.5	2	13	10	8	sw.	J. W. Evens.
Center	Oliver	2,100	5	23.2	.....	65	3	-15	14	0.28	-0.17	7-8	0.5	4	10	15	6	nw.	Fred L. Hein.	
Drake	McHenry	1,634	14	19.4	+4.0	55	3	-18	14	0.16	-0.13	0.14	7	1.4	2	13	7	11	s.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	47	18.8	+8.5	44	18	-16	14	T.	-0.42	T.	4	T.	0	16	9	6	nw.	Hubert Downs.
Eckman	Bottineau	1,500	38	21.6	+11.3	48	37	-15	14	T.	-0.48	T.	2	T.	0	16	11	4	sw.	E. R. Sherman.
Fessenden	Wells	1,610	31	21.6	+9.8	49	18	-17	14	0.12	-0.48	0.12	8	2.0	1	19	6	6	nw.	John V. Zuber.
Fort Yates	Siox	1,670	43	25.5	+6.3	55	3	-11	14	T.	-0.42	T.	7	T.	0	21	7	3	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Steele	1,657	22	22.8	+8.6	52	3	-16	14	T.	-0.51	T.	7	T.	0	10	15	6	sw.	E. C. Bierbaum.
Gackle	Logan	1,951	13	22.2	.....	52	3	-14	14	0.10	-0.21	0.10	7-8	1.0	1	15	8	8	w.	Jack Dixon.
Garrison	McLean	1,925	66	21.2	+6.8	55	3	-13	14	0.25	-0.21	0.12	4	1.3	3	13	15	3	w.	Mae H. Vorachek.
Granville	McHenry	1,504	36	22.4	+9.4	54	3	-15	14	0.05	-0.42	0.05	7-8	0.7	2	18	10	3	s.	Fred Roble.
Hansboro	Towner	1,597	35	18.3	+9.1	47	3	-17	14	0.10	-0.58	0.01	7	0.3	1	17	8	6	nw.	W. F. Disher.
Harvey	Wells	1,596	40	.....	.....	.....	.....	.....	.....	0.14	-0.42	0.14	7-8	2.0	2	3	16	12	s.	Orville Holsch.
Leeds	Benson	1,515	3	20.4	.....	47	3	-17	14	0.10	0.07	8	1.0	2	6	20	5	w.	John Dulmage.	
Linton	Emmons	1,711	26	22.3	+7.0	53	18	-13	14	0.31	-0.07	0.17	7	2.4	4	15	5	11	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	28	19.8	+8.4	48	3	-19	14	0.12	-0.22	0.12	8	1.3	1	11	16	4	nw.	A. T. Folland.
Mandan, 1 1/2 miles SW	Morton	1,750	29	22.2	+7.1	57	3	-11	14	0.19	-0.28	0.11	26	T.	2	14	3	14	sw.	No. Gt. Plains Field Sta.
Max	McLean	2,093																		

Climatological Data for December 1943																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days			Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Almont, 7 miles WSW	Morton	2,300	1	24.2	.....	53	3	-13	14	0.25	.....	0.16	25	1.0	3	14	9	8	sw.	Hogan Ramsland.
Alpha, 1 mile S	Golden Valley	16	.....	.....	.....	.....	.....	.....	.....	0.03	-0.47	0.03	7	T.	1	13	10	3	nw.	H. A. Bury.
Amidon	Slope	2,908	20	25.4	+6.3	58	3	-14	14	0.11	-0.30	0.06	7	1.5	3	17	12	2	w.	A. M. Neseth.
Beach	Golden Valley	2,759	37	24.2	+5.8	50	3	-11	22	0.05	-0.45	0.05	7	0.2	1	13	12	6	sw.	Mrs. Belle Callahan.
Bowbells	Burke	1,958	14	20.4	+7.8	47	3	-14	14†	T.	-0.40	T.	2†	T.	0	10	10	11	w.	Charles Kaufman.
Bowman	Bowman	2,872	28	23.8	+6.2	57	3	-12	14†	0.15	-0.21	0.08	25	1.0	2	17	3	11	nw.	Oscar L. Erickson.
Crosby	Divide	1,954	34	20.4	+7.5	49	3	-15	14	0.01	-0.50	0.01	7	T.	1	17	8	6	sw.	Vernon V. Nichols.
Dickinson, 1 mile NW	Stark	2,543	50	22.1	+5.3	57	3	-17	14†	0.05	-0.45	0.04	7	0.5	2	19	9	3	nw.	Leroy Moomaw.
Dickinson Airpt., 5† mi. S.	Stark	2,577	3	24.2	.....	56	3	-11	14†	0.06	.....	0.04	25	0.2	2	11	8	12	w.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	43	24.6	+6.6	54	3	-12	14	0.06	-0.40	0.04	4	0.2	2	10	13	8	nw.	O. T. Evenson.
Elbowoods	McLean	2,082	49	24.4	+8.5	60	3	-12	14	0.11	-0.27	0.10	4-5	T.	2	22	7	2	nw.	H. W. Case.
Epping	Williams	2,224	32	21.5	+6.3	53	3	-15	14	0.09	-0.36	0.09	7	0.5	1	21	2	8	sw.	T. Beachler.
Fairfield, 9† miles N	Billings	2,650	6	.....	.....	.....	.....	.....	.....	0.11	-0.24	0.11	7	0.5	1	21	3	7	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	24	25.0	.....	57	3	-15	14	0.17	-0.34	0.17	7	2.0	2	14	8	9	nw.	Verne King.
Golva, 1 mile E	Golden Valley	2,781	3	24.0	.....	58	3	-12	14	0.07	.....	0.07	7	0.3	1	10	10	11	w.	U. S. Airway Comm. Sta.
Grenora†	Williams	2,114	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John S. Sorenson.
Halliday	Dunn	2,073	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Gerhart.
Hettinger	Adams	2,675	35	26.2	+7.9	58	3	-13	14	0.10	-0.30	0.10	26	0.0	1	20	8	3	nw.	A. W. Anderson.
Kennmare	Ward	1,799	11	23.0	+6.8	50	3	-12	14†	0.01	-0.45	0.01	12	T.	1	15	11	5	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	33	23.6	+7.1	58	3	-10	14	0.08	-0.33	0.07	7	1.0	2	15	8	8	nw.	S. P. Grane.
Medora	Billings	2,271	27	.....	.....	.....	.....	.....	.....	0.02	-0.50	0.02	7	0.2	1	21	2	8	sw.	Harry Roberts.
Mott	Hettinger	2,424	35	25.5	+9.7	57	3	-14	14	0.16	-0.44	0.16	25-26	0.4	1	23	3	5	nw.	P. G. Wick.
New England	Hettinger	2,621	48	24.6	+7.2	53	4	-18	14	0.23	-0.18	0.18	25	5.0	2	16	8	7	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	1,929	27	21.6	+7.1	54	3	-15	14	0.07	-0.33	0.03	4	0.6	4	15	15	1	sw.	Peter F. Nick.
Parshall	Mountain	1,954	37	20.2	+7.6	46	3	-17	14	T.	-0.47	T.	2†	T.	0	16	11	4	nw.	C. E. Shubert.
Portal	Burke	2,205	37	20.4	+4.6	46	3	-14	14	0.02	-0.54	0.02	3	0.2	1	21	8	2	nw.	U. S. Customs Service.
Powers Lake	Burke	2,467	26	25.0	+8.8	54	3	-14	14	0.17	-0.22	0.14	7	1.3	3	14	8	9	.....	Geo. H. Gee.
Richardton, 1† miles N	Stark	1,835	17	20.4	+6.9	54	3	-12	14†	0.16	-0.34	0.08	4	1.0	2	12	16	3	nw.	Assumption Abbey.
Sanish	Mountain	2,253	5	20.8	.....	52	3	-15	14	T.	.....	T.	7	T.	0	22	7	2	w.	H. J. Bugge.
Stanley	Mountain	2,279	14	.....	.....	.....	.....	.....	.....	T.	-0.38	T.	8†	T.	0	18	8	5	w.	Leroy Edwards.
Tioga	Williams	2,279	14	.....	.....	.....	.....	.....	.....	0.25	-0.15	0.24	7	3.8	2	3	20	8	sw.	H. Fraucus Cannon.
Trotters	Golden Valley	1,864	3	22.8	.....	57	3	-14	14	0.20	.....	0.10	4†	0.5	2	25	4	2	nw.	Walter Grunewald.
Van Hook	McKenzie	2,084	29	23.8	+8.5	51	3	-14	22	0.09	-0.45	0.08	7	2.2	2	19	7	5	sw.	V. L. Snyder.
Watford City	Williams	2,258	15	.....	.....	.....	.....	.....	.....	0.13	-0.45	0.09	7	0.8	4	8	15	8	sw.	J. C. Zeller.
Wildrose	Williams	1,878	63	23.2	+9.4	55	3	-14	14	0.13	-0.45	0.09	7	0.8	4	8	15	8	sw.	Fred E. Mancher.
Williston	Williams	1,878	63	23.2	+9.4	55	3	-14	14	0.10	-0.35	0.24	7	0.8	2	16	9	6	nw.	U. S. Weather Bureau.
Average for Western Division				23.2	+7.4	60	3	-13	14	0.10	-0.35	0.24	7	0.8	2	16	9	6	nw.	
Average for the State				21.5	+8.1	65	3	-22	14	0.12	-0.36	0.35	7-8	1.0	2	16	9	6	nw.	

Daily Temperatures for December 1943																																						
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean					
Ashley 3	Maximum...	33	29	43	40	34	38	35	34	33	32	41	30	12	6	17	30	41	48	33	39	20	6	23	42	47	35	28	34	40	35	35	32.					
	Minimum...	11	1	22	25	24	18	21	19	13	21	25	-1	-10	-14	-6	7	19	19	14	10	-2	-11	-8	16	21	3	-3	7	10	8	6	9.					
Bismarck Airport 1	Maximum...	35	35	54	39	38	43	40	35	37	36	42	32	14	10	-8	18	37	42	49	33	38	20	10	23	45	45	38	32	36	35	31	35	34.				
	Minimum...	16	14	31	28	24	19	24	21	16	21	27	4	-7	-9	-2	4	19	17	14	6	1	-7	-5	14	26	6	1	3	12	9	3	12.					
Bottineau 5	Maximum...	35	31	42	42	41	43	43	38	33	34	41	32	12	9	20	33	43	45	40	30	20	5	21	34	38	22	30	31	35	37	35	32.					
	Minimum...	16	4	21	20	27	17	17	18	-3	13	10	1	-7	-16	-5	3	13	18	17	5	-1	-15	-11	15	8	-10	-10	-10	-8	10	-4	5.					
Carson	Maximum...	37	40	56	50	39	43	38	35	36	38	42	36	25	13	19	44	45	51	35	40	25	15	22	48	45	40	35	35	32	32	40	36.					
	Minimum...	21	15	26	29	26	19	24	21	12	21	26	10	2	-14	-3	6	23	21	15	10	12	-11	-7	15	25	11	0	11	13	7	10	12.					
Crosby 5	Maximum...	36	37	49	39	35	36	34	34	31	31	38	33	10	10	26	38	38	44	37	27	25	3	26	34	48	38	32	34	30	27	31	32.					
	Minimum...	15	9	31	25	11	17	26	13	-2	9	13	3	0	-15	-1	8	19	22	16	9	-2	-14	-11	17	25	4	-2	9	10	1	3	8.					
Devils Lake 1	Maximum...	35	27	44	34	35	40	41	32	33	27	40	16	2	18	17	32	40	46	33	26	11	3	21	41	46	39	31	36	38	37	32	30.					
	Minimum...	8	3	24	16	18	16	24	14	5	12	16	-5	-15	-16	-4	8	20	19	19	11	-8	-12	-9	13	22	-6	-8	8	14	11	7	7.					
Dickinson Airport 3	Maximum...	36	43	56	42	36	43	38	29	32	36	39	26	19	12	28	44	42	45	30	37	16	10	34	43	45	34	35	36	32	32	40	34.					
	Minimum...	18	18	23	23	23	21	26	17	16	17	22	6	-8	-11	5	12	26	27	15	14	-2	-11	-1	24	29	8	7	15	11	8	15	13.					
Dunn Center 5	Maximum...	36	45	54	51	37	43	36	33	34	37	41	37	16	13	25	45	46	47	37	36	26	14	32	44	47	42	37	38	38	33	40	36.					
	Minimum...	19	14	30	30	22	17	25	21	12	16	22	8	-2	-12	0	3	26	21	20	6	12	-11	-9	19	28	13	0	9	7	3	8	12.					
Fargo Airport 1	Maximum...	37	27	42	37	40	41	41	34	36	32	42	23	5	13	17	29	38	49	36	31	13	2	17	44	40	36	23	32	30	36	33	30.					
	Minimum...	12	8	21	27	29	14	23	26	10	11	17	-3	-12	-13	-7	6	18	15	18	11	-5	-9	-11	14	27	3	-6	4	10	9	9	8.					
Fessenden	Maximum...	34	32	45	48	34	41	42	33	33	32	41	34	8	8	20	25	40	49	37	32	18	10	22	40	49	40	35	38	38	35	38	34.					
	Minimum...	17	7	24	21	24	18	22	22	5	13	21	3	-5	-17	-7	4	22	21	19	14	5	-11	-8	16	26	6	-6	10	13	9	6	9.					
Fullerton	Maximum...	36	30	46	47	36	40	42	33	35	35	45	37	11	8	18	30	42	51	43	42	28	11	20	47	42	42	35	30	37	36	38	40.					
	Minimum...	26	7	21	29	28	17	22	31	13	27	29	7	1	-13	-6	7	15	17	26	9	11	-8	-10	12	23	10	5	7	10	14	7	12.					
Garrison 3	Maximum...	35	37	55	37	37	42	37	34	35	34	45	41	28	11	8	19	35	44	46	32	32	19	6	22	42	43	24	36	37	29	34	32.					
	Minimum...	12	10	35	27	22	20	26	14	12	16	23	4	-10	-13	-5	1	21	20	12	9	-5	-10	-6	16	26	0	-1	10	11	7	5	10.					
Golva 3	Maximum...	45	45	58	51	36	42	34	28	31	35	39	26	25	16	34	43	42	45	32	35	21	10	38	41	44	33	37	37	35	33	39	35.					
	Minimum...	18	20	34	26	19	20	23	20	17	19	23	3	-3	-12	-2	10	26	25	6	10	1	-11	1	22	25	3	3	7	7	8	14	12.					
Grafton	Maximum...	34	25	39	39	36	37	36	36	35	35	42	40	2	-10	-8	16	27	40	45	43	30	14	5	16	42	37	36	31	32	36	43	35.					
	Minimum...	17	-1	18	20	23	13	25	28	4	6	4	0	-6	-14	-8	5	15	15	26	13	0	-9	-11	11	12	8	-5	3	13	9	10	8.					
Grand Forks Airport 3	Maximum...	34	25	38	36	34	38	37	33	33	30	40	40	9	1	7	17	29	36	44	32	25	9	3	17	40	40	32	27	32	32	36	29	28.				
	Minimum...	8	3	22	21	27	14	24	20	3	6	9	-1	-14	-14	-7	5	14	15	19	8	-5	-9	-12	10	14	-2	-5	2	11	9	10	6.					
Jamestown Airport 3	Maximum...	34	27	45	37	34	41	42	34	35	30	42	28	10	10	17	34	42	49	35	38	16	8	19	44	43	38	30	38	38	38	37	32.					
	Minimum...	10	2	20	26	22	17	22	19	6	16	21	-2	-12	-15	-10	6	20	17	16	11	-6	-11	-14	13	24	-1	-8	2	11	11	1	7.					
Kenmare 5	Maximum...	25	43	50	38	38	40	38	32	35	32	43	14	11	14	25	45	45	47	34	30	13	11	29	41	47	17	39	43	41	36	38	32.					
	Minimum...	18	12	21	33	24	23	25	24	12	21	21	13	1	-12	-10	10	12	28	20	18	9	-12	-12	4	24	11	2	13	14	11	10	12.					
Langdou	Maximum...	35	26	45	39	34	38	37	33	31	31	40	40	28	3	10	16	28	39	41	37	26	11	5	15	42	40	37	28	33	42	41	33	30.				
	Minimum...	11	-1	20	16	22	8	15	21	-3	4	13	-7	-15	-22	-9	5	16	16	19	8	-3	-17	-15	9	9	3	-11	4	10	9	4	4.					
Marmarth	Maximum...	37	44	58	52	37	44	33	35	30	43	42	33	28	18	36	46	43	48	43	37	28	17	39	47	48	30	35	25	32	34	40	37.					
	Minimum...	25	21	30	26	27	14	19	19	22	13	21	19	6	-10	5	5	15	18	19	5	10	-5	3	10	26	15	4	5	14	6	17	13.					
Minot Airport 3	Maximum...	35	38	51	38	37	41	39	31	34	33	42	29	6	9	29	39	44	47	33	26	18	7	22	42	44	33	35	40	36	31	36	22.					
	Minimum...	13	10	35	27	21	23	29	13	7	17	29	-2	-11	-14	-1	8	26	28	17	14	-7	-10	3	18	25	-3	3	17	14	9	10	11.					
Mott	Maximum...	47	45	57	55	40	44	38	35	35	38	43	38	22	15	23	46	46	51	41	41	30	18	28	48	44	42	37	36	36	36	41	28.					
	Minimum...	23	17	29	25	28	13	23	21	12	18	25	11	11	-14	0	4	20	16	17	7	11	-11	6	17	21	16	5	8	8	3	5	12.					
Pembina Airport 3	Maximum...	33	24	38	34	33	35	33	33	33	30	40	4	-5	-7	14	25	36	43	33	26	5	-2	16	37	35	26	27	29	38	39	28	26.					
	Minimum...	6	-1	21	14	25	9	20	15	-1	-1	3	-6	-17	-16	-10	4	15	13	16	4	-8	-14	-14	8	13	-5	-8	3	8	6	6	3.					
Sharon	Maximum...	35	25	38	34	34	39	40	33	31	32	40	32	9	8	17	30	37	46	36	28	12	6	18	42	42	36	28	35	39	37	30	30.					
	Minimum...	15	0	22	20	25	12	21	24	3	10	8	-7	-9	-18	-11	8	19	16	17	12	0	-13	-13	11	22	3	-8	8	12	11	4	7.					
Steele	Maximum...	33	31	50	45	45	40	38	37	35	34	40	33	5	8	19	31	40	48	33	35	23	7	22	42	44	35	26	35	37	32	32	32.					
	Minimum...	20	5	21	25	22	10	17	22	7	12	19	4	-5	-19	-10	0	16	14	18	5	6	-14	-14	7	22	-8	-8	5	7	4	0	6.					
Valley City	Maximum...	35	30	44	41	37	42	40	39	32	35	42	37	8	8	18	31	38	49	45	33	27	12	19	46	43	39	30	38	36	35	35	33.					
	Minimum...	24	8	24	24	26	17	24	28	10	17	13	5	-2	-13	-9	9	18	16	27	18	-7	-8	-11	10	27	11	-5	0	12	10	5	11.					
Wahpeton	Maximum...	36	30	43	46	42	41	41	39	38	35	46	42	10	11	18	29	38	50	41	43	36	12	19	45	44	22	34	35	39	38	41	35.					
	Minimum...	24	6	19	26	28	17	22	32	13	19	13	1	-4	-15	-6	3	14	15	25	16	5	-9	-10	18	13	-8</											

[illegible]

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ¹ Precipitation is for the 24-hours, midnight to midnight. ² Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. ³ Data for 24 hours ending 12:30 a. m. C.S.T. ¹ Precipitation measured with recording gage. * included in the next measurement T. Trace, or 0.005 inch or less
[WBO, Minneapolis, 2-14-44-1050]

551.05
UNNT
1.52
No. 13

nat'l heat

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

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UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LII

BISMARCK, N. D., ANNUAL 1943

No. 13

GENERAL SUMMARY

The outstanding feature of the weather was the heavy snowfall in January and March. At Richardton 83.7 inches fell during the year. The snowfall was followed by warm weather, and floods occurred in all sections of the state. The precipitation for the year also averaged above normal, although some stations in the Devils Lake area had subnormal moisture. It was the fourth consecutive year with precipitation above normal and the total amount during the past 4 years was the greatest in any consecutive 4-year period since records began. The growing season was one of the shortest of record but, due to the generous precipitation and cool summer weather, one of the best crops in the history of the state was harvested. It was an especially good year for small grain and for grasses.

The average temperature for the state was 39.8°, or 0.3° above the 1892-1943 average, and 1.1° lower than the 1942 average. The highest annual temperature reported was 43.7° at Mott; the lowest was 35.5° at Hannah. The absolute range in temperature was 148°, from 104° at Mott on August 1st to -44° at Hannah on January 20th.

The average annual precipitation for the state was 18.38 inches, or 1.31 inches above the 1892-1943 average, and 0.37 inch less than the average for 1942. The greatest annual precipitation reported was 27.11 inches at Minor; the least was 10.40 inches at Maddock. The greatest monthly amount reported was 8.06 inches at Hankinson in June. The average snowfall was 41.0 inches. The average number of days with 0.01 inch or more of precipitation was 76. There were 157 clear days, 109 partly cloudy days, and 99 cloudy days. The prevailing wind was northwest.

THE WEATHER BY MONTHS

JANUARY.—Cold month. The 16th to 26th was one of the coldest periods of record. The snowfall was heavy over the southwest part of the state where a number of stations reported more than 20 inches. At the end of the month many stations had more than a foot of snow on the ground. Much yard feeding of livestock was necessary. Highways were blocked at times.

FEBRUARY.—Warm weather over the southwest part of the state caused the Little Missouri River to break up unusually early. Near Rhame, floods caused some property damage and livestock losses. Because of the many days with light snowfall followed by melting, streets, walks, and highways became glazed in places during the last half of the month. Numerous accidents were reported.

MARCH.—The weather during the first 3 weeks of March was cold and stormy. From the 22d to the 31st mild weather prevailed. It was the coldest March since 1912. Considerable care and feeding of livestock was necessary. Precipitation was above normal in all sections. The total snowfall was the greatest ever recorded in March. During the blizzard, from March 14th to 17th, snow fell almost continuously and was blown into huge drifts, many of them 10 to 15 feet deep. Highways were blocked in some sections and schools and business places were closed.

[Continued on p. 55]

CLIMATOLOGICAL SUMMARY, 1943

Month	Temperature in degrees Fahrenheit				Precipitation, in inches			Number of days				Prevailing direction of the wind
	Mean	Departure	Highest	Lowest	Average	Departure	Snowfall	Precip., .01 inch or more	Clear	Pt. cloudy	Cloudy	
January	-1.4	-7.8	45	-44	0.73	+0.26	9.4	7	10	8	13	nw.
February	15.1	+5.4	62	-32	0.50	+0.03	6.4	5	11	8	9	nw.
March	17.0	-6.8	77	-30	1.23	+0.44	14.8	7	11	11	5	nw.
April	44.9	+3.3	83	11	1.48	+0.03	0.1	5	15	10	5	nw.
May	49.9	-3.6	96	15	2.21	-0.11	1.0	9	8	10	13	nw.
June	60.4	-2.5	102	28	5.07	+1.61	1.3	13	8	11	11	nw.
July	70.5	+1.5	103	41	2.72	+0.27	0	8	19	9	3	nw.
August	67.7	+1.2	104	31	2.61	+0.56	0	9	16	10	5	se.
September ..	55.6	-1.2	94	19	0.51	-1.03	0	4	17	9	4	nw.
October	48.2	+4.2	89	10	0.76	-0.25	2.8	3	18	8	7	se.
November	28.7	+1.9	63	-4	0.44	-0.14	4.2	4	8	8	14	nw.
December	21.5	+8.1	65	-22	0.12	-0.36	1.0	2	16	9	6	nw.
Annual ...	39.8	+0.3	104	-44	18.38	+1.31	41.0	76	157	109	99	nw.

ANNUAL COMPARATIVE DATA FOR THE STATE

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.8	108	-52	20.24	21.00	13.79	18.34	34.9	70	157	95	114
1893...	35.8	112	-54	18.02	16.33	13.19	15.85	46.1	65	154	104	107
1894...	40.3	107	-47	17.45	14.55	14.84	15.61	24.6	56	174	100	91
1895...	37.7	104	-50	18.41	16.97	16.69	17.36	20.9	63	155	117	93
1896...	37.3	107	-42	26.30	21.67	19.97	22.65	48.3	80	143	111	112
1897...	37.8	109	-48	18.75	16.04	13.26	16.02	33.9	63	162	105	98
1898...	39.2	106	-38	18.97	15.55	13.92	16.15	22.7	57	159	108	98
1899...	36.9	109	-48	17.40	19.48	15.98	17.62	26.6	60	161	105	99
1900...	40.9	114	-48	21.61	18.70	16.88	19.06	23.2	62	178	97	90
1901...	40.4	110	-43	24.35	17.54	16.33	19.41	20.2	63	175	92	98
1902...	39.4	106	-39	21.66	18.50	17.89	19.35	29.9	62	160	79	126
1903...	38.3	108	-49	20.18	18.27	19.28	19.24	28.8	65	166	81	118
1904...	37.6	103	-52	21.59	18.26	13.59	17.81	38.1	68	150	73	143
1905...	39.3	107	-46	23.23	19.17	14.34	18.91	29.6	66	152	79	134
1906...	39.4	109	-40	21.14	17.68	21.28	20.03	35.4	78	164	93	108
1907...	36.9	104	-49	17.17	13.06	12.69	14.31	33.7	63	175	101	89
1908...	40.7	104	-41	18.84	17.77	19.05	18.55	43.7	75	164	97	105
1909...	35.2	109	-48	21.79	15.89	16.61	18.10	33.5	71	143	110	112
1910...	41.1	114	-50	11.88	12.17	13.56	12.54	21.0	52	180	92	93
1911...	38.0	108	-43	21.73	18.60	14.94	18.42	36.5	76	160	100	105
1912...	38.2	118	-52	22.72	19.73	18.71	20.39	19.3	74	161	102	103
1913...	40.0	106	-54	17.55	13.39	12.70	14.65	19.4	64	166	104	95
1914...	40.1	109	-47	19.81	19.57	17.53	18.97	30.0	70	155	110	100
1915...	39.7	104	-48	21.06	19.06	17.72	19.28	21.2	72	148	101	116
1916...	36.2	105	-56	24.11	18.88	16.63	19.87	54.2	70	170	97	99
1917...	36.3	114	-48	12.61	10.44	9.20	10.75	40.5	60	154	111	100
1918...	40.0	102	-44	18.01	16.00	14.01	16.01	29.7	63	159	104	102
1919...	38.6	108	-44	20.55	14.71	11.51	15.59	47.2	60	165	107	93
1920...	39.5	108	-44	17.67	14.26	13.92	15.28	27.9	64	166	108	92
1921...	42.0	110	-33	23.05	18.96	16.30	19.44	29.4	74	158	111	96
1922...	39.7	115	-46	21.97	19.09	18.62	19.89	42.8	75	155	100	110
1923...	40.7	103	-40	19.12	16.65	17.60	17.79	30.1	64	160	110	95
1924...	38.2	105	-46	20.23	16.39	14.74	17.12	26.1	66	158	101	107
1925...	40.6	111	-39	21.91	14.74	13.29	16.65	19.7	64	158	107	100
1926...	40.7	108	-36	18.05	14.40	13.65	15.37	23.7	68	151	105	109
1927...	38.0	101	-44	22.72	21.25	20.56	21.51	36.2	79	150	102	113
1928...	41.1	107	-41	20.03	18.12	15.48	17.88	17.3	59	177	101	88
1929...	38.0	109	-44	15.09	13.27	14.57	14.31	41.8	65	171	98	96
1930...	41.4	107	-43	17.13	14.19	13.36	14.89	25.0	66	166	101	98
1931...	44.9	111	-31	18.48	14.10	12.41	15.00	18.0	56	180	92	93
1932...	40.0	108	-34	18.43	16.39	16.71	17.18	34.9	69	156	108	102
1933...	41.1	110	-45	14.01	12.74	13.59	13.45	42.2	65	161	104	100
1934...	43.4	112	-44	13.33	8.61	6.60	9.51	15.2	54	160	109	96
1935...	39.4	110	-44	21.24	17.97	14.91	18.04	33.3	77	137	113	115
1936...	38.8	121	-60	10.09	8.21	8.18	8.83	35.2	59	171	110	85
1937...	39.1	111	-44	20.10	17.37	13.63	17.03	36.0	69	150	111	104
1938...	41.9	109	-41	15.27	14.60	16.13	15.33	30.6	73	149	116	100
1939...	41.9	108	-46	15.56	13.88	13.01	14.15	25.5	71	161	109	95
1940...	41.0	107	-39	19.23	16.79	16.14	17.39	33.6	80	142	110	114
1941...	42.2	111	-40	25.07	22.42	22.19	23.23	25.1	92	128	115	122
1942...	40.9	105	-35	22.40	17.62	16.22	18.75	35.3	84	128	114	123
1943...	39.8	104	-44	18.89	18.58	17.68	18.38	41.0	76	157	109	99
Period	39.5	121	-60	19.36	16.53	15.30	17.07	31.1	68	159	103	103

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Climatological Data for the Year 1943

Stations	County	Elevation, feet	Temperature (degrees Fahrenheit)						Precipitation (inches)						Number of days					Prevailing direction of wind
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	With 0.1 in or more precip.	Clear	Pt. cloudy	Cloudy	
Eastern Division																				
Casselton	Cass	934	48	41.3	97	June 20	-32	Jan. 17	48	22.80	5.65	Aug.	0.05	Dec.	26.5	76	223	78	64	s.
Cavalier	Pembina	894	34	38.5	95	July 8	-37	Jan. 21	34	15.49	3.71	June	0.27	Oct.	38.1	78	148	74	143	nw.
Cooperstown	Griggs	1,428	47	40.8	96	July 31	-35	Jan. 17	47	17.79	3.71	June	0.20	Nov.	30.1	73	150	107	108	nw.
Devils Lake	Ramsey	1,478	47	38.4	92	July 22	-34	Jan. 17	47	13.43	4.66	June	0.16	Dec.	20.2	82	102	109	154	nw.
Edgeley, 2 mi. S	LaMoure	1,568	43	40.8	99	Aug. 1	-33	Jan. 17	43	18.09	3.60	July	T.	Dec.	41.6	71	140	144	81	nw.
Edmore, 14 mi. W	Ramsey	1,524	19	36.6	92	Aug. 6	-42	Jan. 18	20	13.38	3.74	June	0.12	Feb.†	21.7	52	208	89	68	nw.
Ellendale	Dickey	1,457	41	40.9	98	Aug. 1	-32	Jan. 17	49	19.42	5.47	June	0.01	Dec.	55.9	94	168	77	120	nw.
Fargo Airport, 2½ mi. NNW	Cass	895	63	40.2	95	July 31	-30	Jan. 17	63	24.22	5.64	June	0.10	Dec.	24.6	98	117	112	136	s.
Forman	Sargent	1,249	7	41.7	96	July 31†	-38	Jan. 17	51	23.82	7.58	June	T.	Dec.	49.3	66	226	76	63	sw.
Fullerton	Dickey	1,439	47	41.2	97	Aug. 1	-31	Jan. 17	46	24.01	6.09	June	0.04	Dec.	66.4	88	140	121	104	nw.
Grafton	Walsh	827	52	40.0	92	July 31†	-32	Jan. 17	52	20.37	6.01	July	0.27	Dec.	30.8	65	122	143	100	nw.
Grand Forks, 2 mi. W	Grand Forks	830	53	38.8	94	July 31	-36	Jan. 17	53	17.31	3.55	May	0.27	Jan.	41.7	82	149	125	91	nw.
Grand Fks Airport, 2½ mi. W	Grand Forks	832	3	38.2	93	July 31†	-32	Jan. 17	3	17.31	3.47	July	0.15	Sept.	46.9	83	110	124	131	nw.
Hankinson	Richland	1,068	15	41.0	98	July 31	-29	Jan. 17†	15	23.45	8.06	June	0.04	Dec.	59.3	71	138	125	102	nw.
Hannah	Cavalier	1,568	35	35.5	87	July 9	-44	Jan. 20	52	18.40	5.75	July	0.05	Feb.	17.6	53	96	137	132	nw.
Hillsboro	Trail	901	43	40.4	96	July 31	-30	Jan. 17†	43	20.25	5.09	Aug.	0.15	Dec.	28.0	92	134	120	111	n.
Jamestown, 2 mi. SE	Stutsman	1,457	52	41.2	97	July 31	-32	Jan. 18	52	18.41	5.33	June	0.20	Dec.	45.1	75	167	85	113	nw.
Jamestown Airport, 2 mi. NE	Stutsman	1,494	3	39.4	95	July 31	-33	Jan. 17†	3	18.70	4.77	June	0.13	Dec.	48.7	94	119	119	127	nw.
Kensal, 7 mi. SW	Stutsman	1,440	4	39.3	94	Aug. 1	-34	Jan. 18	4	16.52	4.41	June	0.20	Sept.†	26.7	65	163	113	89	nw.
Langdon, 1 mi. E	Cavalier	1,615	48	37.6	90	Aug. 6	-40	Jan. 20	48	16.26	3.14	June	0.25	Oct.	33.4	107	135	129	101	nw.
Larimore	Grand Forks	1,134	51	39.7	95	July 31	-34	Jan. 17	50	15.22	2.56	July	0.02	Jan.	22.6	61	142	74	149	nw.
Lisbon	Ransom	1,091	40	40.8	99	Aug. 1	-30	Jan. 17†	40	21.83	5.48	June	0.12	Dec.	41.1	84	162	45	148	nw.
Mayville	Trail	975	48	41.0	94	July 31	-31	Jan. 17	48	16.29	3.17	Aug.	0.15	Dec.	28.4	62	170	75	120	n.
McHenry, 3 mi. NE	Eddy	1,509	22	38.0	91	June 18	-37	Jan. 18	22	17.62	3.43	July	0.26	Dec.	27.3	82	162	94	109	nw.
McLeod, 3 mi. E	Ransom	1,075	32	40.7	97	June 20†	-35	Jan. 19	33	20.01	5.78	June	0.11	Dec.	42.6	64	191	92	52	sw.
Milnor	Sargent	1,117	4	39.4	97	Aug. 1	-38	Jan. 17	14	27.11	6.14	June	T.	Dec.	60.7	52	234	88	43	nw.
Oakes	Dickey	1,318	15	39.8	98	Aug. 1	-42	Jan. 19	15	22.42	7.56	June	0.06	Dec.	66.5	78	189	22	154	nw.
Park River	Walsh	998	40	38.2	91	July 8†	-35	Jan. 17†	40	16.17	4.56	June	0.07	Feb.	19.5	49	227	69	69	nw.
Pembina Airport, 1 mi. S	Pembina	803	70	37.1	95	July 8	-36	Jan. 20	70	12.50	2.60	June	0.13	Feb.	14.6	75	63	154	148	nw.
Sharon	Steele	1,516	17	39.2	96	July 31	-37	Jan. 17	20	18.92	5.31	June	0.12	Sept.	31.9	94	114	137	114	nw.
Valley City	Barnes	1,229	38	41.6	95	July 31	-29	Jan. 17†	38	15.82	3.36	June	0.17	Dec.	31.3	83	197	81	87	nw.
Wahpeton	Richland	962	52	42.1	94	June 20†	-34	Jan. 17	52	24.59	7.87	June	0.04	Dec.	40.9	102	124	130	111	nw.
Middle Division																				
Ashley, 1 mi. SE	McIntosh	2,014	48	38.9	98	Aug. 1	-36	Jan. 17	48	20.28	5.63	Aug.	T.	Dec.	61.8	94	99	107	159	w.
Bisbee	Towner	1,601	8	39.1	96	Aug. 6	-39	Jan. 17	8	16.80	3.71	Aug.	0.20	Sept.	36.9	55	167	84	114	nw.
Bismarck	Burleigh	1,670	69	42.4	96	July 31	-34	Jan. 18	69	19.46	6.36	June	0.19	Sept.	47.1	86	129	111	125	nw.
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	4	41.0	95	July 31	-38	Jan. 18	4	19.50	6.44	June	0.23	Sept.	42.5	101	129	111	125	nw.
Bottineau	Bottineau	1,638	52	38.7	95	Aug. 9	-43	Jan. 18	52	17.22	3.77	Aug.	0.09	Dec.	22.6	59	242	40	83	nw.
Butte, 3 mi. WSW	McLean	1,880	18	39.9	90	Aug. 18	-33	Jan. 17	18	19.77	4.85	June	0.17	Dec.	42.7	68	144	76	145	nw.
Carrington	Foster	1,579	38	38.6	94	July 31	-33	Jan. 18	46	16.13	4.90	June	0.08	Dec.	29.3	69	165	79	121	nw.
Carson, 2½ mi. SW	Grant	2,500	32	41.5	100	July 31†	-40	Jan. 17	32	17.83	6.09	June	0.27	Dec.	51.0	63	167	105	93	nw.
Center	Oliver	2,100	5	40.1	95	July 31	-38	Jan. 17	5	23.03	7.31	June	0.28	Dec.	68.6	94	114	169	82	nw.
Drake	McHenry	1,634	14	39.3	94	July 8	-34	Jan. 17	15	14.09	4.20	June	0.04	Oct.	32.3	73	172	43	150	w.
Dunseith, 2 mi. NNE	Rolette	1,682	48	37.6	94	July 8†	-41	Jan. 20	48	18.36	.....	.....	T.	Nov.†	33.6	74	162	116	87	nw.
Eckman	Bottineau	1,500	38	38.2	90	July 8†	-41	Jan. 25	38	21.86	5.58	July	T.	Dec.	37.5	63	140	128	97	nw.
Fessenden	Wells	1,610	32	40.0	92	July 9†	-34	Jan. 17	32	13.64	3.33	June	0.12	Dec.	33.5	68	190	100	75	n.
Fort Yates	Sioux	1,670	44	42.9	101	Aug. 1	-38	Jan. 18	44	20.15	6.53	June	T.	Dec.	58.8	41	231	73	61	nw.
Foxholm, 6½ mi. NE	Ward	1,657	19	39.5	90	Aug. 30	-35	Jan. 20	23	20.05	5.72	June	T.	Dec.	41.9	85	106	131	128	nw.
Gackle	Logan	1,951	14	40.6	97	July 24	-33	Jan. 17†	14	20.65	5.73	June	0.10	Dec.	49.7	67	134	123	108	nw.
Garrison	McLean	1,911	49	39.5	94	July 31	-33	Jan. 18	49	19.69	4.85	June	0.21	Feb.	44.8	85	121	145	99	nw.
Granville	McHenry	1,504	37	39.4	94	July 10	-35	Jan. 17	37	18.49	4.54	July	0.05	Dec.	41.4	78	204	92	69	nw.
Hansboro	Towner	1,597	36	36.7	88	July 9†	-43	Jan. 20	36	17.45	5.97	July	0.01	Dec.	32.0	63	171	105	89	nw.
Leeds	Benson	1,515	3	39.6	95	Aug. 6	-35	Jan. 17	3	12.87	3.11	June	0.10	Dec.	21.3	49	104	178	83	w.
Linton	Eminous	1,711	26	42.2	100	Aug. 1	-38	Jan. 18	27	21.19	7.60	June	0.31	Dec.	45.5	92	149	90	126	nw.
Maddock, 1 mi. E	Benson	1,604	29	39.6	95	July 22†	-36	Jan. 17	29	10.40	2.45	June	0.12	Dec.	20.6	67	122	157	86	nw.
Mandan, 1½ mi. S	Morton	1,750	30	40.9	95	July 31	-36	Jan. 18†	30	21.22	7.43	June	0.19	Sept.	51.8	74	158	44	163	nw.
Max	McLean	2,093	15	38.4	92	Aug. 6	-35	Jan. 21	15	19.69	5.48	June	0.14	Dec.	42.1	80	163	75	127	nw.
McClusky	Sheridan	1,943	19	40.7	93	July 31†	-38	Jan. 17	26	16.77	4.34	June	0.07	Dec.	32.0	47	177	129	59	nw.
Minot Airport, 1 mi. N	Ward	1,724	48	39.3	92															

Monthly and Annual Precipitation for the Year 1943, with Departures from the Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual		
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	
Eastern Division																											
Casselton	0.38	-0.08	0.69	+0.19	0.77	+0.28	1.38	-0.29	3.11	+0.24	5.39	+1.68	3.32	+0.53	5.65	+3.06	0.54	-1.58	1.40	-0.07	0.12	-0.51	0.05	-0.49	22.80	+2.96	
Cavalier	0.66	-0.01	0.46	-0.06	1.42	+0.71	1.19	-0.16	3.01	+0.61	3.71	+0.51	1.90	-0.77	1.03	-1.33	0.67	-1.59	0.27	-1.14	0.83	+0.04	0.34	-0.50	15.49	-3.69	
Colgate	0.21	.....	0.61	.....	0.52	.....	2.11	.....	2.28	.....	4.22	.....	1.59	.....	3.15	.....	0.25	.....	0.95	.....	0.22	.....	0.11	.....	16.22	.....
Cooperstown	0.35	-0.14	0.89	+0.43	0.82	+0.19	2.34	+0.95	2.83	+0.23	3.71	+0.38	3.20	+0.74	2.06	-0.57	0.73	-1.09	0.39	-0.73	0.20	-0.48	0.33	-0.23	17.79	-0.32	
Courtney	0.19	-0.49	0.37	-0.24	0.78	-0.33	1.77	+0.11	2.06	-0.01	4.64	+1.78	2.18	-0.13	2.97	+0.84	0.42	-0.94	0.34	-0.99	0.34	-0.18	0.12	-0.48	16.18	-1.06	
Devils Lake	0.39	-0.08	0.41	-0.09	0.49	-0.29	1.45	-0.07	2.21	+0.18	4.66	+1.10	2.27	-0.30	0.49	-1.99	0.31	-1.32	0.40	-0.85	0.19	-0.53	0.16	-0.38	13.43	-4.62	
Edgely	0.65	+0.25	0.73	+0.40	0.97	+0.26	1.24	-0.53	1.73	-0.90	3.57	-0.09	3.60	+0.83	2.47	0.00	1.60	-0.19	0.93	-0.16	0.60	+0.11	T	-0.40	18.09	-0.39	
Edmore	0.22	-0.29	0.12	-0.32	0.61	-0.07	1.70	+0.48	2.12	+0.20	3.74	+0.48	3.17	+0.42	0.58	-1.72	0.35	-1.45	0.17	-0.88	0.48	-0.22	0.12	-0.46	13.38	-3.83	
Ellendale	0.89	+0.40	0.50	-0.04	1.60	+0.69	1.06	-0.73	1.98	-0.79	5.47	+2.19	2.96	+0.22	2.61	-0.11	0.60	-1.16	1.11	0.00	0.63	+0.01	0.01	-0.45	19.42	+0.23	
Fargo	0.33	-0.34	0.69	0.00	0.85	-0.16	1.05	-1.13	3.65	+0.76	5.64	+1.59	2.52	-0.91	6.81	+3.92	0.79	-1.43	1.64	-0.05	0.15	-0.75	0.10	-0.62	24.22	+0.88	
Forman	0.84	+0.38	1.31	+0.77	1.02	+0.28	0.80	-1.07	3.22	+0.07	7.58	+4.09	4.11	+1.14	2.18	-0.60	0.68	-1.49	1.42	-0.03	0.66	+0.04	T	-0.56	23.82	+3.02	
Furlerton	1.33	+0.54	1.00	+0.07	2.05	+0.85	0.88	-1.26	2.01	-1.17	6.09	+2.32	3.52	+0.40	3.77	+1.24	0.85	-1.25	1.60	+0.17	0.87	+0.01	0.04	-0.81	24.01	+1.11	
Grafton	0.31	-0.18	0.64	+0.10	1.42	+0.77	1.71	+0.50	2.44	+0.27	3.91	+0.51	6.01	+3.46	1.26	-1.32	1.00	-1.34	0.62	-0.60	0.78	+0.04	0.27	-0.27	20.37	+1.94	
Grand Forks	0.27	-0.24	1.07	+0.51	0.92	+0.18	1.93	+0.31	3.55	+0.96	2.70	-0.65	3.44	+0.69	1.07	-1.57	0.83	-1.21	0.74	-0.66	0.49	-0.33	0.30	-0.30	17.31	-2.31	
Grand Forks Airport	0.29	.....	1.66	.....	1.16	.....	1.85	.....	2.66	.....	2.50	.....	4.47	.....	1.77	.....	0.15	.....	1.02	.....	0.21	.....	0.22	.....	17.31	.....
Hankinson	0.33	-0.15	1.02	+0.55	1.92	+0.91	0.79	-1.41	3.27	+0.48	8.06	+4.75	2.02	-0.37	2.16	-0.33	1.29	-0.84	1.91	+0.72	0.64	-0.05	0.04	-0.43	23.45	+3.83	
Haunah	0.25	-0.47	0.05	-0.54	0.75	-0.06	0.85	-0.19	2.32	+0.20	3.75	+0.36	5.75	+3.40	3.10	+0.98	1.05	-1.15	0.15	-0.99	0.15	-0.60	0.23	-0.39	18.40	+0.67	
Hillsboro	0.31	-0.20	1.02	+0.44	0.69	-0.06	1.95	+0.11	3.24	+0.15	4.17	+0.80	1.53	-1.15	5.09	+2.39	0.35	-1.80	1.30	-0.17	0.45	-0.37	0.15	-0.51	20.25	-0.37	
James town	0.37	-0.18	1.35	+0.79	1.70	+0.83	1.14	-0.44	1.91	-1.09	5.33	+1.72	2.32	-0.46	3.03	+0.34	0.27	-1.57	0.40	-0.88	0.36	-0.32	0.20	-0.46	18.41	-1.72	
James town Airport	0.37	.....	1.35	.....	2.43	.....	1.14	.....	1.88	.....	4.77	.....	2.31	.....	3.06	.....	0.23	.....	0.57	.....	0.43	.....	0.13	.....	18.70	.....
Kensal	0.40	.....	0.43	.....	0.78	.....	1.87	.....	2.98	.....	4.41	.....	2.14	.....	3.37	.....	0.20	.....	0.29	.....	0.45	.....	0.20	.....	16.52	.....
Langdon	0.63	+0.06	0.40	-0.22	1.14	+0.34	1.09	-0.06	2.20	+0.18	3.14	-0.26	2.68	+0.31	2.97	+0.51	0.78	-1.54	0.25	-0.89	0.57	-0.25	0.41	-0.22	16.26	-2.04	
Larimore	0.02	-0.64	0.54	-0.04	0.62	-0.15	2.19	+0.59	2.41	-0.48	2.41	-1.45	2.56	-0.66	0.76	-2.02	1.57	-0.69	0.98	-0.58	0.91	0.00	0.25	-0.32	15.22	-6.44	
Lisbon	0.33	-0.24	0.76	+0.14	2.03	+1.39	1.06	-0.75	2.87	-0.05	5.48	+1.64	2.61	-0.58	2.73	+0.05	1.62	-0.52	1.31	-0.02	0.91	+0.25	0.12	-0.36	21.83	+0.95	
Mayville	0.20	-0.20	0.72	+0.14	2.30	+0.65	0.04	-0.95	2.93	+0.02	2.71	-0.64	1.80	-1.46	3.17	+0.54	1.70	-0.49	1.17	-0.17	0.64	-0.05	0.15	-0.39	16.29	-3.20	
McHenry (near)	0.43	-0.01	0.49	-0.01	0.55	-0.10	2.18	+0.82	3.40	+0.10	3.32	-0.16	3.43	+0.67	1.53	-0.95	1.09	-0.42	0.34	-0.68	0.60	+0.08	0.26	-0.24	17.62	+0.01	
McLeod	0.86	+0.29	1.34	+0.73	0.93	+0.22	0.78	-1.15	4.12	+0.85	5.78	+1.77	1.42	-1.55	2.10	-0.32	1.78	-0.43	0.41	-1.07	0.38	-0.28	0.11	-0.37	20.01	-1.31	
McVie	0.31	.....	1.02	.....	1.48	.....	1.70	.....	2.81	.....	4.94	.....	2.69	.....	0.66	.....	0.50	.....	0.23	.....	0.66	.....	0.23	.....	17.23	.....
Minor	0.58	+0.06	1.09	+0.51	1.30	+0.58	1.07	-0.83	5.17	+1.96	6.14	+2.39	2.68	-0.89	5.18	+2.58	1.27	-0.92	1.78	+0.32	1.45	+0.81	T	-0.52	27.11	+6.05	
Oakes	0.70	+0.24	1.91	+1.51	1.50	+0.62	0.70	-1.34	2.40	+0.32	7.56	+4.31	2.41	+0.22	2.50	+0.10	0.65	-0.54	1.46	+0.10	0.57	+0.08	0.06	-0.35	22.42	+5.27	
Park River	0.17	-0.22	0.07	-0.33	0.85	+0.23	1.71	+0.43	2.12	+0.06	4.66	+1.17	0.44	+1.54	0.69	-1.73	1.03	-1.21	0.21	-1.07	0.64	-0.05	0.08	-0.35	16.17	-1.53	
Pembina	0.35	-0.29	.....	.....	0.80	-0.01	1.03	-0.17	2.69	+0.33	3.29	-0.04	2.36	+0.01	2.91	+0.72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pembina Airport	0.24	-0.40	0.13	-0.50	0.54	-0.27	0.96	-0.24	2.13	-0.23	2.60	-0.73	1.53	-0.82	4.43	+0.24	0.73	-1.49	0.66	-0.65	0.27	-0.54	0.28	-0.36	12.50	-5.99	
Petersburg	0.29	+0.01	0.51	+0.16	1.07	+0.43	2.03	+0.78	2.56	+0.56	5.34	+1.05	4.12	+1.22	1.08	-1.16	1.29	-0.14	0.74	-0.47	0.40	-0.08	0.14	-0.24	17.80	+2.12	
Sharon	0.26	-0.20	0.60	+0.24	1.18	+0.64	2.87	+1.47	3.32	+0.52	5.31	+1.55	2.68	-0.04	1.14	-1.30	0.12	-2.06	0.83	-0.53	0.46	-0.30	0.17	-0.29	18.92	-0.30	
Valley City	0.36	-0.14	0.89	+0.42	1.06	+0.39	1.48	-0.06	1.69	-1.11	3.36	-0.10	1.89	-0.92	3.06	+0.85	0.37	-1.51	1.01	-0.17	0.48	-0.21	0.17	-0.31	15.82	-2.87	
Wahpeton	0.36	-0.06	0.71	+0.22	0.86	+0.21	0.95	-0.98	2.90	+0.24	7.87	+4.16	2.78	-0.44	4.56	+1.88	1.18	-1.20	2.02	+0.45	0.36	-0.40	0.04	-0.42	24.59	+3.66	
Middle Division																											
Ashley	1.13	+0.66	1.03	+0.54	1.10	+0.31	0.31	-1.35	1.47	-1.07	3.95	+0.71	4.01	+1.18	5.63	+3.08	0.33	-1.27	0.88	-0.28	0.44	-0.18	T	-0.56	20.28	+1.77	
Beulah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.55	+2.61	4.72	+2.44	2.59	+0.68	0.34	-1.28	1.44	+0.51	0.58	+0.20	0.17	-0.18	.....	.....
Bisbee	0.75	+0.32	0.41	+0.05	1.04	+0.31	1.55	+0.41	2.11	+0.01	3.48	-0.01	2.27	-0.32	3.71	+1.21	0.20	-1.55	0.43	-0.66	0.50	-0.02	0.35	-0.07	16.80	-0.29	
Bismarck	1.03	+0.64	0.48	+0.08	1.36	+0.45	0.84	-0.29	1.99	-0.43	6.36	+3.16	1.91	-0.31	2.79	+1.01	0.19	-1.29	1.50	+0.51	0.75	+0.26	0.26	-0.26	19.46	+3.53	
Bismarck Airport	0.75	+0.30	0.53	+0.09	1.31	+0.42	0.87	-0.65	2.05	-0.27	6.44	+3.09	2.15	-0.09	2.72	+0.90	0.23	-1.00	1.54	+0.60	0.58	+0.01	0.33	-0.24	19.50	+3.16	
Botineau	0.61	+0.20	0.25	-0.10	0.92	+0.26																					

Monthly and Annual Mean Temperatures for the Year 1943, with Departures from the Normal

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.
Eastern Division																										
Casselton	-0.8	-5.8	10.9	+1.8	19.4	-5.3	46.3	+4.7	52.8	-1.9	64.2	+0.3	74.2	+4.3	70.4	+3.3	57.2	-0.7	48.7	+4.0	30.2	+3.2	22.2	+9.4	41.3	+1.4
Cavalier	-5.9	.....	10.2	.....	14.8	.....	42.4	.....	50.4	.....	61.2	.....	73.0	.....	68.3	.....	55.0	.....	47.4	.....	27.4	.....	17.3	.....	38.5	.....
Cooperstown	-1.6	-5.9	15.0	+7.2	19.6	-4.7	46.0	+5.7	51.8	-2.0	62.8	-0.4	73.0	+3.4	69.0	+1.6	56.2	-1.5	48.7	+4.0	29.3	+2.0	20.4	+7.4	40.8	+1.4
Devils Lake	-4.8	-6.6	11.0	+5.9	15.8	-4.0	43.0	+4.2	49.0	-3.6	59.5	-2.4	71.1	+3.7	67.1	+2.1	54.9	-0.9	48.0	+5.6	26.9	+2.4	18.9	+9.4	38.4	+1.4
Edgeley	0.0	-8.8	16.1	+3.3	19.4	-7.9	46.0	+3.4	51.2	-3.2	61.6	-2.0	71.6	+1.7	68.2	+0.5	55.0	-3.4	48.1	+2.5	28.8	-0.5	23.7	+8.7	40.8	-0.5
Edmore	-6.6	-6.8	9.8	+5.0	14.0	-7.1	41.6	+2.3	48.6	-4.6	58.0	-4.3	69.0	+1.5	64.7	-0.1	52.4	-4.0	44.9	+2.4	25.2	+0.6	17.2	+6.7	36.6	-0.9
Ellendale	-0.1	-10.1	15.8	+2.7	19.8	-7.4	45.4	+2.7	51.0	-4.3	63.0	-1.8	71.5	+0.6	68.6	-0.1	56.8	-2.0	48.4	+2.5	29.2	+0.8	21.9	+5.6	40.9	-0.7
Fargo	-1.3	-5.1	10.9	+2.8	17.6	-5.1	43.8	+3.2	51.2	-3.8	63.8	-0.6	73.0	+5.1	69.6	+3.5	55.9	-2.3	48.4	+4.0	29.6	+2.5	19.8	+8.3	40.2	+1.0
Forman	-1.4	-8.5	14.2	+4.3	19.5	-6.5	46.3	+2.3	53.2	-2.5	65.4	+0.4	73.3	+3.2	70.4	+2.2	58.0	-1.5	49.7	+6.7	29.8	+1.2	22.4	+7.1	41.7	+0.7
Fullerton	0.9	-8.2	16.0	+3.6	19.8	-7.3	46.0	+3.3	51.2	-3.6	63.6	-0.6	71.6	+1.4	68.3	+0.3	56.0	-2.0	48.0	+2.7	29.6	+0.6	23.3	+8.1	41.2	-0.1
Grafton	-3.0	-5.6	12.2	+4.9	17.9	-3.8	44.0	+3.4	51.2	-2.9	62.4	-1.3	72.6	+3.8	69.4	+3.2	55.0	-2.0	49.5	+5.7	29.2	+4.2	19.6	+8.9	40.0	+1.5
Grand Forks	-3.4	-7.0	10.0	+2.3	16.4	-6.1	43.2	+1.9	49.4	-4.8	62.2	-1.2	72.0	+3.5	68.0	+2.0	55.2	-1.7	47.2	+3.5	27.4	+1.6	18.0	+7.0	38.8	+0.1
Grand Forks Airport	-4.6	.....	8.0	.....	14.9	.....	41.5	.....	49.6	.....	61.8	.....	71.8	.....	68.0	.....	55.8	.....	47.1	.....	27.3	.....	17.4	.....	38.2	.....
Hankinson	1.4	-6.5	14.0	-0.1	18.8	-9.8	44.8	+1.3	51.6	-6.4	61.7	-2.2	73.6	+2.2	68.8	-1.9	55.3	-5.2	47.8	+1.2	29.1	+0.2	21.8	+4.1	41.0	-1.9
Hannah	-7.0	-5.8	8.7	+6.1	9.9	-9.3	39.2	+1.3	46.4	-5.2	57.3	-3.2	67.5	+1.3	63.2	-0.9	52.6	-2.2	46.4	+5.6	25.8	+5.1	16.5	+8.9	35.5	+0.1
Hillsboro	-1.0	-5.9	12.8	+2.6	19.0	-6.3	44.4	+2.2	51.4	-3.4	63.2	-1.5	72.6	+1.9	69.0	+0.8	55.8	-3.2	47.8	+2.6	29.6	+2.3	20.4	+12.4	40.4	+0.4
Jamestown	0.0	-7.1	15.8	+5.9	19.3	-5.1	46.0	+4.3	50.6	-3.5	63.1	-0.6	72.4	+2.8	69.8	+2.9	57.0	0.0	48.9	+4.2	29.4	+2.1	22.2	+7.3	41.2	+1.2
Jamestown Airport	-2.5	.....	13.7	.....	17.6	.....	44.6	.....	49.4	.....	61.5	.....	70.6	.....	67.4	.....	55.3	.....	47.4	.....	27.4	.....	17.4	.....	39.4	.....
Kenel	-2.0	.....	13.8	.....	17.1	.....	43.6	.....	49.3	.....	60.8	.....	70.5	.....	67.2	.....	55.3	.....	46.9	.....	28.6	.....	20.7	.....	39.3	.....
Langdon	-4.8	-4.4	11.4	+6.6	14.8	-5.0	42.6	+5.0	48.7	-3.1	58.6	-2.0	69.0	+2.7	65.1	+1.4	54.0	+0.5	47.8	+6.9	26.2	+2.5	17.5	+8.7	37.6	+1.7
Larimore	-2.6	-6.4	13.8	+6.1	17.4	-5.3	43.6	+3.4	51.0	-2.4	61.0	-1.9	72.0	+3.9	69.1	+3.2	55.9	-0.5	48.0	+3.9	27.8	+2.0	19.2	+7.7	39.7	+1.2
Lisbon	0.4	-7.2	14.7	+3.1	19.8	-7.5	44.2	+2.1	50.4	-4.4	63.7	-0.7	72.3	+1.9	68.2	+0.4	55.0	-3.1	48.8	+3.4	29.9	+1.1	22.4	+7.6	40.8	-0.2
Mayville	-1.8	-7.8	12.6	+2.8	19.4	-5.3	45.4	+2.9	52.2	-3.2	62.4	-2.1	72.4	+0.9	68.8	+1.9	57.6	-0.9	49.4	+3.4	29.9	+2.1	20.6	+7.3	41.0	+0.4
McHenry (near)	-3.6	-5.1	11.6	+6.2	15.8	-7.2	42.6	+2.0	48.6	-4.1	59.9	-1.9	69.8	+1.7	66.4	+0.7	54.3	-1.5	46.6	+3.3	26.2	-0.4	18.0	+7.2	38.0	+0.1
McLeod	0.2	-8.1	13.6	+0.6	17.4	-10.4	45.2	+1.6	50.1	-5.4	63.2	-2.1	73.4	+2.0	69.1	+0.6	58.2	-1.4	47.6	+1.1	29.9	+0.2	20.0	+4.9	40.7	-1.3
Milnor	-5.2	.....	11.0	.....	14.4	.....	45.1	.....	52.0	.....	63.4	.....	74.2	.....	68.4	.....	53.8	.....	48.2	.....	28.8	.....	18.4	.....	39.4	.....
Oakes	-0.4	-9.3	14.4	+1.5	18.4	-9.3	44.2	+1.4	49.4	-6.2	62.9	-2.4	71.5	-0.2	67.4	-1.7	54.8	-4.2	47.8	+1.8	27.5	-1.1	19.6	+3.4	39.8	-2.2
Park River	-4.6	-7.5	11.3	+3.6	15.6	-7.2	41.9	+1.4	49.5	-4.1	59.4	-3.7	70.7	+2.2	67.9	+1.3	55.8	-1.1	47.4	+3.7	26.2	-0.8	17.5	+6.4	38.2	-0.5
Pembina	-7.1	-4.7	.....	.....	13.9	-4.5	42.0	+3.5	48.8	-4.4	60.4	-2.4	70.8	+3.0	65.8	+1.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pembina Airport	-6.0	-3.6	7.8	+5.0	14.6	-3.8	41.2	+2.7	48.8	-4.4	60.4	-2.4	71.4	+3.6	65.9	+1.2	53.2	-1.3	46.7	+5.1	26.3	+2.9	15.0	+8.0	37.1	+1.1
Sharon	-3.2	-6.7	12.0	+2.5	16.6	-7.6	43.2	+3.6	49.6	-4.5	61.6	-1.4	72.6	+1.8	68.0	+0.1	55.7	-1.7	48.0	+4.4	27.4	+2.7	18.9	+6.7	39.2	0.0
Valley City	0.7	-5.4	16.0	+4.5	20.8	-5.5	46.9	+4.5	52.0	-2.6	63.2	-0.9	71.7	+1.6	69.1	+1.4	56.9	-1.9	49.2	+4.1	30.2	+2.2	22.4	+7.9	41.6	+0.8
Wahpeton	0.2	-8.5	14.3	+1.9	19.6	-8.0	46.4	+2.2	53.4	-2.9	65.7	-0.1	73.4	+2.5	70.4	+1.7	58.3	-1.7	50.2	+3.2	30.0	+1.0	22.8	+7.0	42.1	-0.1
Middle Division																										
Ashley	-2.0	-10.7	14.7	+3.3	16.7	-8.2	43.6	+1.2	48.7	-5.5	60.8	-2.4	69.5	-0.2	66.6	-0.6	54.6	-3.3	47.7	+3.3	25.6	-2.4	20.6	+5.8	38.9	-1.7
Bisbee	-2.8	-4.6	11.7	+5.2	16.7	-5.8	43.7	+1.0	49.8	-2.9	59.9	-2.2	70.0	+0.6	67.0	+1.3	56.0	-0.7	48.9	+5.1	28.3	+1.9	19.5	+9.8	39.1	+1.1
Bismarck	1.6	-6.4	18.7	+7.1	19.7	-5.5	48.2	+5.1	52.2	-2.6	62.7	-1.5	72.0	+1.5	70.3	+2.1	58.0	-0.1	50.3	+5.1	30.4	+1.9	24.5	+8.8	42.4	+1.3
Bismarck Airport	-2.0	-8.3	15.3	+6.8	18.6	-3.3	47.0	+7.1	51.4	-1.6	62.2	-0.7	72.6	+3.2	69.4	+2.7	57.4	+0.1	49.0	+5.4	29.0	+2.5	22.7	+9.9	41.0	+2.0
Bottineau	-7.4	-8.8	9.5	+4.6	12.0	-8.8	45.8	+6.8	51.2	-1.1	62.6	+0.8	71.8	+4.2	69.4	+4.7	55.4	-0.1	48.8	+7.4	26.6	+3.0	18.7	+10.4	38.7	+1.9
Butte	-0.8	-8.7	16.6	+3.5	16.8	-9.6	46.1	+3.8	50.2	-4.6	58.9	-3.6	68.8	-1.2	66.4	-0.8	55.9	-1.6	49.8	+4.8	28.8	+2.3	22.5	+7.7	39.9	-0.7
Carrington	-3.6	-10.3	13.4	+4.5	14.8	-8.9	42.4	+2.8	49.4	-3.7	60.3	-3.1	71.0	+1.6	68.4	+1.3	54.2	-2.7	46.8	+3.1	26.6	-0.7	19.8	+7.2	38.6	-0.8
Carson	0.0	-10.1	18.5	+4.0	18.0	-9.0	46.4	+3.9	50.8	-3.7	61.5	-2.2	71.2	+0.4	69.7	+1.1	57.7	-0.4	50.3	+5.8	29.2	-0.6	24.6	+8.0	41.5	-0.2
Center	-0.4	.....	17.4	.....	17.3	.....	45.6	.....	49.8	.....	60.0	.....	69.6	.....	66.8	.....	54.5	.....	47.6	.....	28.9	.....	23.2	.....	40.1	.....
Drake	-3.8	-9.3	13.6	+3.2	14.8	-9.9	44.5	+4.1	50.0	-4.7	59.8	-4.0	71.3	+0.3	68.5	+0.9	55.8	-1.8	48.8	+5.7	28.4	+2.5	19.4	+4.0	39.3	-0.8
Dunseith	-4.4	-7.2	12.5	+5.8	13.2	-7.3	42.6	+3.1	47.8	-5.0	57.6	-3.8	69.1	+2.1	65.6	+1.0	54.2	-0.8	48.							

THE WEATHER BY MONTHS—Continued

With the change to warmer weather on the 22d the snow melted rapidly and before the close of the month much flooding occurred, resulting in some livestock, grain, and hay losses, and many homes in Mandan, Mott, Beulah, and other towns were flooded. Main line trains and busses could not operate due to flooded highways and roadbeds. For complete flood report see the April Climatological Data.

APRIL.—Temperatures averaged above normal. Precipitation was above normal in the northern part of the state and below normal in the extreme southern part. Nearly all the precipitation occurred after the 26th. There was very little snow. Wind velocities were above the average and a few dust storms were reported. Prairie fires also caused some damage. Plowing and seeding of small grain were getting under way by the close of the month. Grass was growing slowly. Livestock were in good condition. Much flooding occurred.

MAY.—The month was cool. Temperatures were unusually low from the 7th to the 14th and some frost damage occurred. Precipitation was above normal in the eastern half of the state and below normal in the western half. Farm work made rapid progress due to the favorable weather conditions, but lowlands could not be planted due to the April floods. The cool weather retarded the growth of grass, and pastures and ranges were backward.

JUNE.—Temperatures averaged considerably below normal, especially in the central and western divisions. Freezing temperatures on the 3d caused some crop damage in the western and northern parts of the state. Precipitation was well above normal. The snowfall on the 3d was the heaviest ever recorded in June. Ten inches fell at a few places in Mountrail County, and drifts several feet deep had to be removed from the highways. Crops were backward due to cool weather. Considerable hail damage occurred.

JULY.—Temperatures averaged above normal but no unusually high readings occurred. The precipitation was above the normal. The warm weather and above normal sunshine were favorable for crops. Damage amounting to millions of dollars resulted from wind and hailstorms. The most severe storms occurred on July 12th when all sections had losses from hail or wind or both. Several hundred barns were destroyed and many houses damaged.

AUGUST.—The weather was warm and moist. It was an excellent month for growing crops. Temperatures averaged slightly above normal. The precipitation was light in northeastern counties, excessive in extreme southeastern counties, and moderate elsewhere. Considerable hail and some wind damage occurred in the southern and western counties. On August 30th a severe wind storm in northern Cass County destroyed much of the crop in that section. Crops and pastures were generally very good at the close of the month.

SEPTEMBER.—The month was cool and dry. Temperatures from the 9th to the 11th and from the 16th to the 25th were considerably below normal, and killing frosts occurred at many stations. Very little precipitation occurred after the 15th. There was no snowfall and no severe storms were reported. The weather was excellent for harvesting and threshing, and by the close of the month threshing was nearly completed in the southern part of the state and more than half completed in the northern part. Yields were mostly excellent.

OCTOBER.—Temperatures averaged considerably above normal. The precipitation on the 12-13th ended a 6-weeks' dry period, but some stations had no precipitation until the 20th. The first general snowstorm occurred on the 31st. Nearly 10 inches fell at some of the stations in the southern part of the state on that date. It was an excellent month for outdoor work, and farm work was well along in spite of the labor shortage. Much grain was piled on the ground due to lack of storage space. Feed was plentiful until the snowstorm on the 31st and livestock were in good condition.

NOVEMBER.—Mild month. Only a few stations in the north-eastern and southwestern parts of the state reported sub-zero readings. The precipitation was light to moderate. There was much cloudy weather. It was an excellent month for outdoor work and for livestock. Creeks and ponds were free of ice.

DECEMBER.—The month was warm and dry. It was the second driest December since 1892 and the driest since 1913. Outdoor work continued and little yard feeding of livestock was necessary. By the close of the month practically all of the grain previously stored on the ground was in elevators.

KILLING FROSTS					
STATIONS	Last in Spring	First in Autumn	STATIONS	Last in Spring	First in Autumn
<i>Eastern Div.</i>					
Casselton	May 12	Sept. 20	Linton	May 17	Sept. 9
Cavalier	" 12	" 20	Maddock	" 14	" 10
Cooperstown	" 13	" 10	Mandan	" 13	" 10
Devils Lake	" 13	" 10	Max	" 26	" 10
Edgeley	" 27	" 10	McClusky	" 13	" 10
Edmore	June 5	" 10	Minot	" 14	Oct. 14
Ellendale	May 13	" 10	Mohall	" 14	Sept. 10
Fargo	" 13	" 20	Napoleon	" 14	" 10
Forman	" 13	Oct. 14	New Salem	" 27	" 10
Fullerton	" 13	Sept. 10	Pettibone	" 17	" 9
Grafton	" 13	" 20	Rolla	" 27	" 10
Grand Forks	" 14	" 10	Rugby	" 7	" 10
Hankinson	" 13	" 20	Steele	" 17	" 9
Hannah	" 17	" 10	Towner	" 15	" 10
Hillsboro	" 13	" 17	Turtle Lake	" 13	" 10
Jamestown	" 13	" 10	Underwood	" 17	" 10
Kensal	" 14	" 10	Upham	" 12	" 9
Langdon	June 5	" 10	Velva	" 14	" 10
Larimore	May 14	" 10	Washburn	" 13	" 10
Lisbon	" 13	" 20	Westhope	" 14	" 10
Mayville	" 13	" 15	Willow City	" 14	" 10
McHenry	" 27	" 10	Wilton	" 13	" 10
McLeod	" 12	" 10	Wishek	" 13	" 10
Milnor	" 13	" 25	<i>Western Div.</i>		
Oakes	" 13	" 10	Amidon	" 14	" 19
Park River	" 13	" 10	Beach	" 26	" 16
Pembina	" 13	" 20	Bowbells	" 26	" 10
Petersburg	" 13	" 10	Bowman	" 26	" 20
Sharon	" 14	" 25	Crosby	" 27	" 10
Valley City	" 13	" 10	Dickinson	" 26	" 19
Wahpeton	" 13	" 10	Dunn Center	" 26	" 9
<i>Middle Div.</i>			Elbowoods	June 4	" 9
Ashley	" 17	" 10	Epping	May 26	" 16
Bisbee	" 14	" 10	Fryburg	" 14	" 19
Bismarck	" 13	" 10	Golva	June 3	" 9
Bottineau	" 17	" 22	Hettinger	May 26	Oct. 14
Butte	" 25	" 10	Kenmare	" 14	" 14
Carrington	" 13	" 10	Marmarth	" 26	Sept. 9
Carson	" 26	" 9	Medora	" 26	" 8
Center	" 18	" 10	Mott	" 26	" 9
Drake	" 13	" 10	New England	" 26	" 9
Dunseith	" 14	" 10	New Hradec	" 26	" 19
Eckman	" 17	" 10	Parshall	" 27	" 10
Fessenden	" 14	" 10	Portal	" 26	" 10
Fort Yates	" 17	" 10	Powers Lake	" 11	" 9
Foxholm	" 26	" 10	Richardton	" 13	Oct. 14
Gackle	" 15	" 10	Sanish	" 26	Sept. 10
Garrison	" 17	" 10	Stanley	" 26	" 10
Granville	" 14	" 10	Van Hook	" 26	" 10
Hansboro	" 27	" 10	Watford City	" 26	" 10
Leeds	" 14	" 10	Williston	" 26	Oct. 14

MONTHLY AMOUNTS OF EVAPORATION—inches, and WIND MOVEMENT—miles, FOR 1943										
Station	Data	Apr.	May	June	July	Aug.	Sept.	Seasonal	Average	Observer
Dickinson	Evaporation	4.900	4.120	5.009	6.689	7.031	5.057	32.806	37 years	Agri. Experiment Substa.
	Wind movement	4.800	4.150	3.710	2.690	3.110	3.545	22.005	34.777	
Mandan	Evaporation	4.375	4.045	4.501	6.258	5.256	4.093	28.528	30 years	No. Gr. Plains Field Sta.
	Wind movement	5.070	4.412	3.348	2.597	2.988	3.490	21.905	33.868	

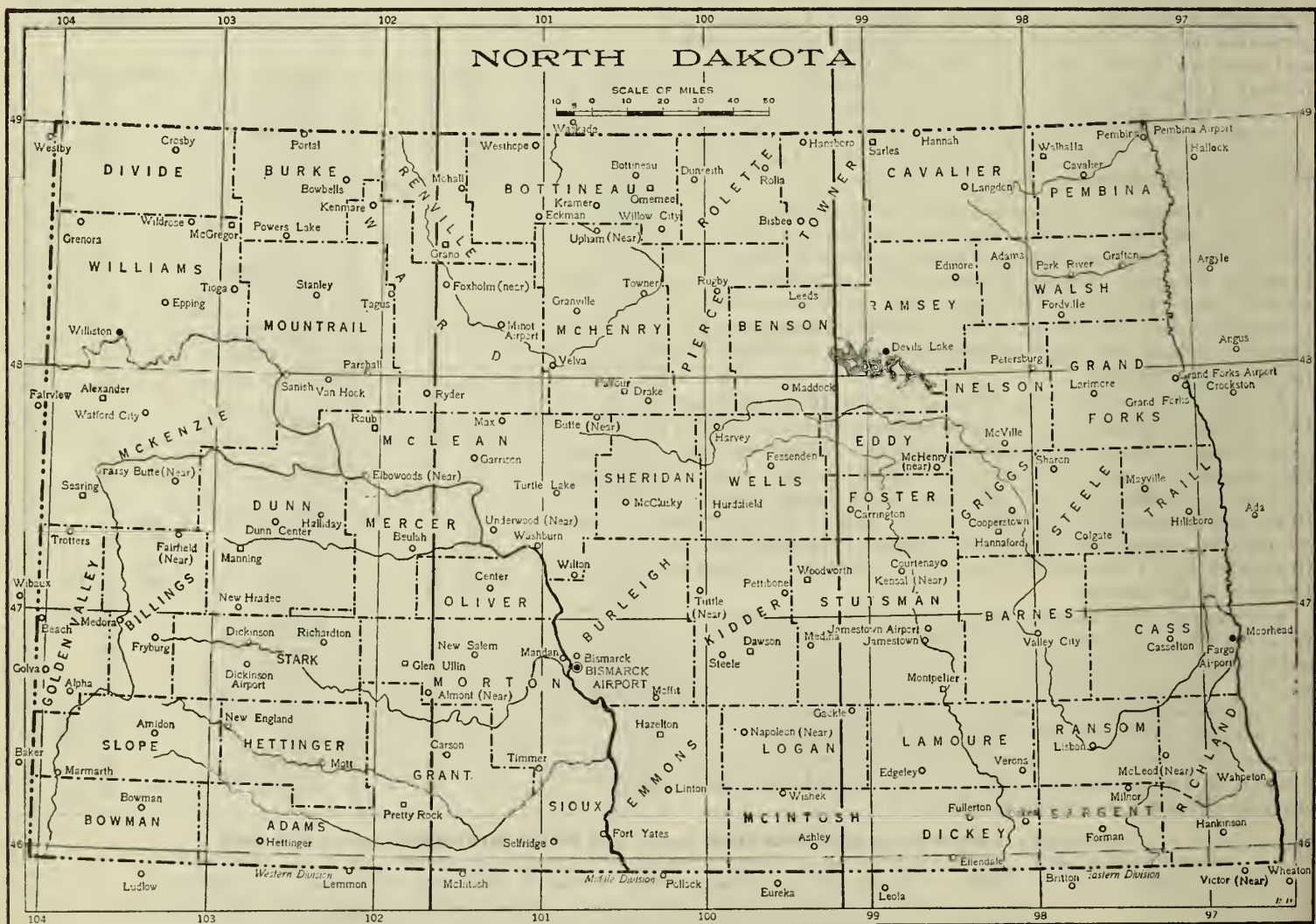
Monthly and Annual Precipitation for the Year 1943, with Departures from the Normal—Continued

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
<i>Western Division—Con.</i>																										
Elbowoods	0.86	+0.61	0.28	-0.12	1.11	+0.55	1.98	+0.97	1.81	-0.43	5.02	+1.15	2.67	+0.31	2.57	+0.65	0.51	-1.08	0.70	-0.19	0.80	+0.43	0.11	-0.27	18.42	+2.58
Epping	0.60	+0.16	0.12	-0.29	1.53	+0.94	1.59	+0.56	1.35	-0.83	6.50	+2.93	1.74	-0.24	2.07	+0.37	0.37	-1.02	0.26	-0.53	0.12	-0.32	0.09	-0.36	16.34	+1.87
Fairfield	1.17	+0.66	0.27	-0.13	0.94	+0.18	1.90	+0.58	1.86	-0.28	4.85	+1.38	1.68	-0.53	3.80	+2.60	0.45	-0.94	0.80	+0.16	0.26	-0.12	0.11	-0.24	18.09	+3.32
Fryburg	0.98	+0.53	0.54	+0.07	0.78	0.00	1.42	+0.25	1.16	-1.23	3.00	-0.30	1.21	-0.98	3.42	+1.46	0.34	-1.03	1.24	+0.19	0.52	+0.03	0.17	-0.34	14.78	-1.35
Golva	1.09	.....	0.17	.....	0.32	.....	1.60	.....	1.48	.....	2.82	.....	1.28	.....	2.81	.....	0.12	.....	0.67	.....	0.58	.....	0.07	.....	13.01	.....
Hettinger	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.74	-0.62	1.73	+0.10	0.26	-1.14	0.80	+0.03	0.11	-0.31	0.10	-0.30	.....	.....
Kenmare	0.60	+0.25	0.33	-0.04	1.99	+1.36	1.71	+0.76	2.68	+0.72	7.34	+4.28	3.60	+1.31	2.63	+0.69	0.22	-1.39	0.24	-0.82	0.68	+0.13	0.01	-0.45	22.03	+6.80
Marmarth	0.67	+0.27	0.55	+0.11	0.72	0.00	0.77	-0.25	1.54	-0.78	6.62	+3.56	2.22	+0.34	2.54	+0.80	0.14	-1.15	1.19	+0.34	0.48	+0.09	0.08	-0.33	17.52	+3.00
Medora	0.77	+0.20	0.29	-0.12	0.83	+0.09	1.22	+0.19	1.04	-1.20	3.64	+0.27	1.71	-0.16	2.69	+1.04	0.20	-1.17	0.99	+0.17	0.08	-0.42	0.02	-0.50	13.48	-1.61
Mott	1.19	+0.55	0.42	-0.20	0.68	-0.25	0.50	-0.71	0.82	-1.58	4.79	+1.57	1.46	-0.68	2.51	+0.58	0.08	-1.33	0.64	-0.30	0.52	+0.04	0.16	-0.44	13.77	-2.75
New England	1.85	+1.35	0.74	+0.25	1.70	+0.92	1.05	+0.04	0.96	-1.02	7.13	+4.17	1.68	-0.39	4.29	+0.79	0.05	-1.33	0.64	-0.20	0.73	+0.29	0.23	-0.18	19.25	+4.69
New Hradec	1.84	.....	0.40	.....	0.78	.....	2.20	.....	0.64	.....	5.49	.....	2.06	.....	3.97	.....	0.09	.....	0.63	.....	0.26	.....	0.13	.....	18.49	.....
Parshall	0.54	+0.30	0.15	-0.27	1.23	+0.72	1.65	+0.70	2.93	+0.76	6.20	+2.64	2.48	+0.48	2.88	+0.92	0.61	-0.93	0.61	-0.20	0.37	0.00	0.07	-0.33	19.72	+4.79
Portal	0.76	+0.34	0.08	-0.32	1.86	+1.26	0.85	-0.12	2.61	+0.54	5.33	+2.04	1.99	-0.12	2.39	+0.50	0.43	-1.16	0.34	-0.55	0.50	-0.05	T	-0.47	17.14	+1.89
Powers Lake	0.70	+0.19	0.45	-0.01	1.56	+0.87	1.48	+0.27	1.76	-0.42	5.59	+1.99	2.66	+0.67	3.26	+1.49	1.20	-0.31	0.60	-0.62	1.04	+0.55	0.02	-0.54	20.32	+3.53
Richardson	1.31	+0.93	0.95	+0.55	2.25	+1.53	1.11	-0.03	1.15	-1.43	5.54	+2.13	2.22	-0.03	4.00	+2.05	0.27	-1.09	1.48	+0.60	0.34	-0.14	0.17	-0.22	20.79	+4.85
Sanish	0.67	+0.19	0.17	-0.26	1.68	+1.10	1.95	+0.85	1.57	-0.33	7.50	+4.12	2.87	+0.82	1.12	+2.58	0.70	-0.48	0.98	+0.17	0.54	+0.04	0.16	-0.34	22.91	+7.46
Stanley	0.59	.....	0.50	.....	1.86	.....	1.76	.....	2.82	.....	6.84	.....	3.51	.....	1.60	.....	0.71	.....	0.65	.....	0.48	.....	0.13	.....	21.32	.....
Tioga	1.10	+0.67	0.10	-0.27	1.20	+0.57	1.48	+0.50	1.74	-0.32	7.48	+4.42	1.29	-0.74	3.23	+1.48	0.42	-0.86	0.27	-0.54	0.23	-0.53	T	-0.44	18.54	+4.24
Trotters	1.56	+1.16	0.31	-0.06	1.25	+0.49	1.68	+0.65	1.50	-0.82	4.94	+1.46	1.53	-0.03	3.28	+1.77	0.15	-1.10	0.80	-0.03	0.63	+0.19	0.25	-0.15	17.88	+3.53
Van Hook	0.58	.....	0.17	.....	1.45	.....	1.49	.....	1.89	.....	5.58	.....	1.97	.....	3.00	.....	0.25	.....	0.70	.....	0.30	.....	0.20	.....	17.58	.....
Watford City	1.10	+0.63	0.38	-0.04	1.86	+1.18	1.86	+0.70	1.67	-0.30	6.13	+2.93	1.05	-0.78	3.96	+2.25	0.42	-0.90	1.15	+0.28	0.41	-0.09	0.09	-0.45	20.08	+5.41
Willrose	0.77	+0.25	0.36	-0.12	1.48	+0.79	1.16	+0.31	1.69	-0.03	6.29	+3.96	1.71	-0.02	.....	.....	.....	.....	0.46	+0.11	.....	.....	0.13	-0.45	16.92	+2.12
Williston	1.51	+0.97	0.38	-0.03	1.71	+1.02	1.15	-0.05	1.29	-0.77	5.53	+2.10	1.81	-0.08	2.01	+0.54	0.32	-0.77	0.70	-0.16	0.38	-0.20	0.13	-0.45	16.92	+2.12

The departures from normal precipitation for stations with 15 years or more of record are computed from a normal or "standard mean," adjusted to a uniform 35-year period; for stations of 10 to 14 years, the means for the period of record are used.

T. Precipitation 0.005 inch or less.
ITALICS, Data interpolated.

CHART SHOWING METEOROLOGICAL STATIONS



○ Section Center ● Weather Bureau Office ○ Substation □ Hydroclimatic Substation
(The State was divided into 3 divisions for 1943 along the 99th and 102d meridians. For 1944 and thereafter the divisions will be as shown by heavy division lines on map above.)
[WBO, Minneapolis, 4-26-44-1500]

551.05
UNNT
1.53'

Nat Hist.

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

THE UNITED STATES

MAY 1 1944

UNIVERSITY OF ILLINOIS

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIII BISMARCK, N. D., JANUARY 1944 No. 1

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GENERAL SUMMARY

The outstanding feature of the weather during January was the continued mild weather, lack of precipitation, high winds, and cloudy days. It was the warmest January since state-wide records began in 1892. Only a few stations had more than 10 days with minimum temperatures of zero or below. January was the fifth consecutive month with precipitation below normal. Nearly all the precipitation occurred on the 18th and from the 25th to the 28th. The least amount occurred in the eastern division where only six other Januaries had less precipitation. Due to the mild weather outdoor work was carried on with little interruption and due to lack of snow cover little feeding of live-stock was necessary.

TEMPERATURE

The mean temperature for the state was 21.8°, or 15.1° above the 1892-1944 average for January. The mean temperature for the eastern division was 20.7°; for the middle division, 21.2°; and for the western division, 23.4°. The highest mean temperature was 27.6° at Amidon and New England, and the lowest, 16.0° at Pembina Airport, making a range in mean temperature of 11.6°. The absolute range was 87°, from 61° at Fryburg on the 23d, to -26° at Mohall on the 6th. The average daily excess in temperature for the state since January 1, 1944, is 15.1°.

PRECIPITATION

The average precipitation for the state was 0.37 inch, or 0.10 inch less than the 1892-1944 average for January. In the eastern division the average amount was 0.26 inch; in the middle division, 0.33 inch; and in the western division, 0.51 inch. The greatest monthly amount reported was 1.24 inches at Marmarth; the least was a trace at four stations. The greatest amount recorded in any 24 consecutive hours was 1.00 inch at Marmarth on the 27-28th. The accumulated deficiency in precipitation for the state since January 1, 1944, is 0.10 inch. The average snowfall was 4.8 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.68	7	29.36	24	8.5	40	nw.	18	82	83	66	70	61	1287
Devils Lake . . .	30.72	7	29.41	24	8.5	35	nw.	20	86	94	77	76	63	1433
Fargo	30.78	7	29.49	24	11.8	38	nw.	20	78	80	65	70	61	1359
Williston	30.62	7	29.35	23	5.8	33	nw.	20	81	84	70	64	75	1258

† And other dates

SILENT OBSERVERS

The Weather Bureau reports with sincere regret the death during January 1944, of Mr. W. L. Goodison, Lawyer at Larimore, and Cooperative Observer at that station since 1931. Mr Goodison's reports were prompt, well rendered, and most useful to the Weather Bureau.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lunar halos	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thunderstms.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, 0.01 inch or more	Clear	Partly cloudy	Cloudy
1892	3.3	58	-52	0.31	0.41	0.25	0.32	2.8	4	15	8	8
1893	0.8	52	-48	0.93	0.94	1.11	0.99	8.4	7	11	11	9
1894	0.6	60	-47	0.38	0.40	0.38	0.39	3.6	4	13	9	9
1895	-2.9	42	-46	0.53	0.69	0.47	0.56	5.5	5	16	8	7
1896	5.3	58	-42	0.75	0.77	0.80	0.77	6.6	6	9	9	13
1897	3.6	49	-38	0.91	0.64	0.76	0.77	7.5	5	11	9	11
1898	14.6	69	-32	0.14	0.12	0.07	0.11	1.1	2	15	8	8
1899	5.2	55	-41	0.29	0.20	0.26	0.25	2.4	3	13	9	9
1900	15.4	70	-30	0.27	0.27	0.12	0.22	2.0	3	15	9	7
1901	7.7	68	-39	0.29	0.29	0.26	0.28	3.0	4	14	8	9
1902	12.7	51	-40	0.17	0.03	0.23	0.14	1.4	2	17	7	7
1903	9.4	56	-37	0.72	0.58	0.68	0.66	6.7	5	13	8	10
1904	3.6	60	-52	0.41	0.36	0.42	0.40	4.0	5	15	6	10
1905	0.9	48	-40	0.26	0.30	0.41	0.32	2.9	3	15	8	8
1906	12.2	60	-38	0.75	0.72	0.61	0.69	6.9	4	14	6	11
1907	-6.2	45	-45	1.77	1.13	1.05	1.32	14.5	8	12	8	11
1908	17.0	70	-41	0.21	0.16	0.34	0.24	1.9	2	17	8	6
1909	3.5	53	-43	0.60	0.32	0.37	0.43	4.3	4	14	8	9
1910	9.4	49	-35	0.30	0.21	0.59	0.37	4.1	3	16	8	7
1911	-1.0	56	-52	0.86	0.96	0.69	0.84	8.5	6	11	8	12
1912	-4.6	63	-52	0.34	0.34	0.36	0.35	3.6	4	16	6	9
1913	3.2	60	-54	0.51	0.40	0.43	0.45	4.6	5	12	9	10
1914	14.8	62	-38	0.56	0.48	0.40	0.48	4.9	4	12	8	11
1915	5.8	51	-48	0.39	0.24	0.25	0.29	3.4	3	12	9	10
1916	-6.4	49	-56	1.58	1.24	1.26	1.36	15.1	6	13	8	10
1917	1.7	47	-46	0.82	0.69	0.65	0.72	8.6	5	13	8	10
1918	0.5	48	-44	0.41	0.43	0.58	0.47	5.0	5	12	8	11
1919	18.7	66	-44	0.24	0.21	0.10	0.18	1.7	2	17	8	6
1920	2.7	49	-44	1.26	0.96	0.68	0.97	10.0	5	10	9	12
1921	15.9	52	-31	0.29	0.20	0.22	0.24	2.5	2	13	9	9
1922	7.0	55	-46	0.68	0.36	0.42	0.49	5.2	5	12	9	10
1923	10.1	56	-35	0.59	0.43	0.54	0.52	6.0	5	9	9	13
1924	2.6	61	-42	0.30	0.20	0.18	0.23	2.5	3	14	9	8
1925	8.6	52	-35	0.33	0.18	0.22	0.24	2.5	3	11	10	10
1926	16.3	55	-30	0.31	0.34	0.49	0.38	4.1	4	13	8	10
1927	10.1	60	-44	0.50	0.36	0.41	0.42	4.3	4	14	8	9
1928	13.0	50	-41	0.21	0.19	0.19	0.20	2.3	3	14	9	8
1929	-4.8	42	-42	0.76	0.48	0.63	0.62	9.2	6	13	8	10
1930	-1.9	41	-43	0.26	0.22	0.40	0.29	2.7	4	12	9	10
1931	21.4	68	-31	0.15	0.15	0.14	0.15	1.4	2	15	8	8
1932	9.5	50	-34	0.47	0.62	0.59	0.56	6.3	4	12	7	12
1933	11.8	53	-30	0.92	0.70	0.79	0.80	10.0	7	12	7	12
1934	15.8	54	-36	0.29	0.14	0.17	0.20	2.0	3	11	9	11
1935	2.3	60	-44	0.55	0.29	0.39	0.41	4.9	6	8	10	13
1936	-5.8	43	-44	0.51	0.48	0.69	0.56	6.9	7	11	8	12
1937	-8.3	38	-44	1.04	0.55	0.42	0.67	9.0	6	13	8	10
1938	9.5	50	-40	0.36	0.42	0.67	0.48	6.1	6	10	9	12
1939	15.0	55	-32	0.56	0.32	0.54	0.47	6.0	6	8	10	13
1940	3.4	48	-39	0.10	0.11	0.10	0.10	1.4	3	13	9	9
1941	11.0	53	-33	0.80	0.56	0.25	0.54	6.3	5	10	7	14
1942	18.3	60	-35	0.09	0.08	0.10	0.09	1.0	2	16	7	8
1943	-1.4	45	-44	0.42	0.74	1.02	0.73	9.4	7	10	8	13
1944	21.8	61	-26	0.26	0.33	0.51	0.37	4.8	3	16	8	7
Period	6.7	70	-56	0.52	0.43	0.46	0.47	5.1	4	13	8	10

NAT.
HIST.

Climatological Data for January 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	20.7	+14.0	52	23	-18	7	0.06	-0.36	0.06	28	0.5	1	18	9	4	nw.	Soo Line Agent.
Casselton	Cass	934	48	22.8	+17.8	50	23	-16	7	0.35	-0.18	0.28	27	3.8	4	19	8	4	s.	C. Hayford.
Cavalier	Pembina	894	34	18.0	.....	49	20	-13	6	0.15	-0.52	0.12	25-26	1.6	3	13	10	8	nw.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	.....	.....	.....	.....	0.10	.....	0.10	28	1.8	1	.....	.....	.....	w.	O. M. Jensen.
Cooperstown	Griggs	1,423	47	21.9	+17.6	54	20	-20	7	0.17	-0.34	0.11	28	1.7	3	.....	.....	.....	sw.	R. J. Lockner
Courtenay	Stutsman	1,523	14	.....	.....	.....	.....	.....	.....	0.04	-0.57	0.03	27	1.0	2	19	8	4	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	18.6	+16.8	48	20	-10	11	0.12	-0.35	0.09	25-26	1.5	4	18	12	11	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	23.6	+14.8	55	20	-11	7	0.20	-0.29	0.20	27	3.8	1	16	7	8	w.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	20	16.9	+16.7	49	20	-11	7	0.12	-0.37	0.12	25-26	1.2	1	23	4	4	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	22.6	+12.6	55	20	-9	7	0.63	+0.17	0.61	27	5.1	2	11	6	14	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NW	Cass	895	17	21.1	+17.3	53	20	-15	7	0.60	-0.07	0.44	27-28	5.8	1	9	9	13	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	22.6	+15.5	56	23	-10	6	0.21	-0.24	0.21	27	4.2	1	20	3	8	sw.	Helge Dyset.
Fullerton	Dickey	1,439	46	23.3	+14.2	56	20	-8	7	0.60	-0.10	0.49	27-28	5.7	5	13	5	13	nw.	F. O. Alin.
Gackle	Logan	1,951	14	23.4	.....	52	23	-13	12	0.55	+0.11	0.35	27	9.3	3	15	12	4	w.	Jack Dixon.
Grafton	Walsh	827	52	21.4	+18.8	50	20	-12	7	T.	-0.50	T.	3	T.	0	12	13	6	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	18.0	+14.4	49	20	-12	6	0.39	-0.14	0.30	27-28	5.1	4	14	11	6	nw.	University of N. Dak.
Grand Forks Airt. 2 1/2 mi. W	Grand Forks	832	4	17.6	.....	49	20	-14	7	0.37	-0.03	0.33	27-28	6.0	4	11	13	7	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	22.8	+14.9	59	20	-12	8	0.33	-0.14	0.33	27-28	6.6	1	24	2	5	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	17.0	+18.2	45	20	-18	6	0.26	-0.44	0.26	25	3.0	1	10	13	8	nw.	A. E. Prior.
Hillsboro	Trall	901	44	20.4	+15.5	52	20	-15	7	0.26	-0.25	0.24	27-28	4.8	2	8	10	13	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	52	23.0	+15.9	51	20	-11	7	0.21	-0.34	0.21	27-28	2.5	2	19	2	10	s.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,491	4	20.9	.....	52	20	-15	7	0.20	.....	0.20	27-28	2.5	2	13	7	11	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	22.0	.....	53	20	-18	6	0.12	.....	0.08	27-28	1.1	3	15	6	10	sw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	18.2	+18.6	48	20	-19	6	0.10	-0.51	0.08	26	0.9	3	10	14	7	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	24.0	+15.4	59	20	-14	7	0.25	-0.34	0.16	27	5.0	3	19	1	11	nw.	J. O. Halverson.
Mayville	Trall	975	48	21.4	+15.4	51	20	-12	6	.....	.....	0.04	.....	.....	.....	13	9	9	.....	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	18.4	+16.9	49	20	-22	7	0.14	-0.28	0.04	17-18	0.9	5	15	10	6	w.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	33	21.8	+13.5	51	20	-15	7	0.55	-0.01	0.28	27-28	8.5	4	18	6	7	sw.	J. G. Carlson.
McVille	Nelson	1,467	14	.....	.....	.....	.....	.....	.....	0.10	.....	0.05	27-28	0.8	3	17	6	8	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	19.2	.....	50	20	-16	7	0.67	+0.19	0.42	27	5.5	2	18	8	5	nw.	E. W. Wilson.
Oakes	Dickey	1,318	15	20.0	+11.1	56	20	-12	8	0.48	+0.01	0.48	27-28	7.2	1	19	0	12	nw.	F. H. Murray.
Park River	Walsh	998	40	18.4	+15.5	47	20	-16	6	T.	-0.49	T.	3	T.	0	24	1	6	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	16.0	+18.4	45	20	-15	6	0.15	-0.48	0.09	18	1.6	4	11	14	6	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	.....	.....	.....	.....	.....	.....	0.03	-0.41	0.02	18	0	2	15	14	2	nw.	T. M. Rykken.
Sharon	Steele	1,516	20	20.0	+16.5	49	20	-17	6	0.07	-0.40	0.04	27	0.5	5	13	11	7	nw.	Nels O. Grefsheim.
Valley City	Barnes	1,245	38	23.3	+17.2	53	20	-15	7	0.48	-0.01	0.40	27-28	7.7	6	15	9	7	nw.	I. C. Robertson.
Wahpeton	Richland	962	52	24.2	+15.5	57	20	-15	7	0.35	-0.10	0.33	27-28	3.0	4	14	4	13	nw.	W. J. Cavanaugh.
Average for Eastern Division				20.7	+15.8	53	20	-12	7	0.26	-0.26	0.61	27	3.8	3	15	8	8	nw.	
Middle Division																				
Ashley, 1 mi. SE	McIntosh	2,014	48	21.2	+12.5	52	20	-10	7	0.15	-0.29	0.08	27-28	2.1	5	9	13	9	w.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	19.2	+17.4	53	20	-17	7	0.09	-0.36	0.09	26	2.0	1	17	5	9	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	25.1	+17.1	52	13	-6	12	0.21	-0.17	0.15	27-28	3.8	4	9	10	12	nw.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE	Burleigh	1,650	5	23.6	+17.3	51	20	-8	12	0.22	-0.23	0.14	27-28	4.6	4	9	10	12	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	19.0	+17.6	50	20	-18	7	0.25	-0.16	0.17	25-26	3.7	3	19	6	6	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	22.1	+14.2	49	23	-18	6	0.29	-0.07	0.22	25-26	3.0	3	20	4	7	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	32	24.5	+14.4	54	24	-7	31	0.91	+0.55	0.73	27-28	10.0	4	15	11	5	nw.	J. W. Evans.
Center	Oliver	2,100	6	22.8	.....	52	23	-12	12	0.40	.....	0.15	17-18	4.2	4	12	15	4	nw.	Fred L. Heinz.
Drake	McHenry	1,634	15	19.4	+13.9	54	23	-19	6	0.21	-0.18	0.16	25	2.3	3	22	2	7	w.	H. G. Kringsen.
Dunseith, 2 miles NNE	Rolette	1,622	48	20.4	+17.6	45	20	-15	7	0.01	-0.42	0.01	25	0.4	1	16	9	6	nw.	Hubert Downs.
Eckman	Bottineau	1,500	39	18.3	+15.2	49	23	-25	6	0.37	+0.01	0.23	26	7.1	3	16	11	4	nw.	E. R. Sherman.
Fessenden	Wells	1,610	32	21.4	+16.7	51	23	-17	6	0.02	-0.47	0.02	7	0.4	1	15	11	5	n.	John V. Zuber.
Fort Yates	Sour	1,670	44	25.6	+16.0	55	20	-10	12	0.45	+0.06	0.30	27-28	6.5	3	19	8	4	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,657	23	22.6	+15.8	54	23	-19	6	0.67	+0.23	0.65	25-26	6.7	4	14	8	9	nw.	E. C. Bierbaum.
Garrison	McLean	1,911	67	21.5	+13.6	52	23	-10	6	0.76	+0.39	0.73	25	7.0	2	13	9	9	w.	Mae H. Vorachek.
Granville	McHenry	1,504	37	20.4	+15.3	52	20	-23	6	0.66	+0.28	0.65	25-26	8.2	3	20	5	6	nw.	Fred Roble.
Hansboro	Towner	1,597	36	17.8	+17.2	47	20	-18	6	0.25	-0.36	0.25	25-26	4.5	2	20	5	6	nw.	W. E. Disher.
Harvey	Wells	1,596	41	.....	.....	.....	.....	.....	.....	0.10	-0.38	0.08	26	2.5	2	12	9	10	w.	Orville Hoksche.
Leeds	Benson	1,515	4	20.1	.....	48	20	-17	6	0.15	.....	0.15	25-26	3.0	1	16	11	4	w.	John Dultage.
Linton	Emmons	1,711	27	23.3	+14.0	53	23	-12	12	0.72	+0.38	0.51	27-28	7.9	3	14	5	12	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	19.1	+14.5	51	23	-21	6	0.11	-0.31	0.08	26	1.4	2	12	13	6	nw.	A. T. Felland.
Mandan, 1 1/2 miles SW	Morton	1,750	30	23.1	+14.5	51	13	-7	12	0.26	-0.11	0.18	28	3.5	2</					

Climatological Data for January 1944-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Partly cloudy	Cloudy		
Western Division																				
Elbowoods	McLean	2,082	50	23.2	+14.6	58	23	-12	12	0.39	+0.06	0.39	25	5.5	1	18	7	6	nw.	H. W. Case.
Epping	Williams	2,224	33	24.0	+18.8	53	23	-12	11	0.20	-0.22	0.20	18	0	1	24	1	6	sw.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	7	25.8						0.21	-0.33	0.21	25	3.0	1	21	4	6	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	25.8		61	23	-5	12	0.97	+0.51	0.60	25	9.0	3	13	11	7	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	23.8		56	23	-13	12	0.52		0.35	27-28	12.0	3	9	12	10	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35	22.8	+17.9	52	14	-10	11	0.15	-0.35	0.10	17	0.3	4	20	6	5	sw.	John S. Sorenson.
Hettinger	Adams	2,675	36	27.0	+13.3	54	19	-5	12	0.80	+0.44	0.55	27	16.0	2	21	5	5	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	22.1	+14.5	53	23	-12	6	0.08	-0.27	0.05	25	0.7	3	22	1	8	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	25.0	+11.5	56	23	-10	12	1.24	+0.82	1.00	27-28	14.8	3	16	7	8	nw.	S. P. Grane.
Medora	Billings	2,271	28							0.55	+0.01	0.30	27	8.0	3	22	4	5	sw.	Harry Roberts.
Mott	Hettinger	2,424	36	25.5	+15.3	54	13†	-10	12	0.97	+0.48	0.47	27-28	12.8	5	23	3	5	nw.	P. G. Wick.
New England	Hettinger	2,621	49	27.6	+14.1	57	23	-9	12	0.99	+0.53	0.64	27-28	14.0	3	11	15	5	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		3	22.8		55	23	-16	7	0.70		0.52	25-26	6.8	6	21	4	6	sw.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	20.3	+14.0	55	23	-18	31	0.44	+0.10	0.42	25-26	4.5	3	11	15	5	sw.	C. E. Shubert.
Portal	Burke	1,954	38	19.2	+16.2	53	23	-17	6	T.	-0.40	T.	†	T.	0	22	6	3	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	18.5	+10.4	56	23	-12	6	0.25	-0.27	0.11	25	3.7	3	18	10	3	n.	Geo. B. Gee.
Richardton, 1 1/2 miles N.	Stark	2,467	27	26.0	+14.9	54	23	-4	11†	0.46	+0.08	0.32	25-26	8.4	4	16	8	7	nw.	Assumption Abbey.
Ryder	Ward	2,108	15							0.70	+0.37	0.55	25	9.0	3	18	6	7	ne.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	19.8	+14.7	56	23	-12	12†	0.50	+0.02	0.40	25	4.8	2	16	8	7	nw.	H. J. Bugge.
Stanley	Mountrail	2,258	6	20.1		50	23	-12	12	0.17		0.11	25	2.5	2	14	13	4	w.	Leroy Edwards.
Tagus	Mountrail	2,179	15							0.24		0.24	24	4.8	1	26	2	3	nw.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15							0.27	-0.16	0.27	17-18	0	1	16	10	5	w.	H. Francis Cannon.
Trotters	Golden Valley		18							0.70	+0.27	0.31	17	4.0	4	2	24	5	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	21.9		56	23	-13	12†	0.38		0.28	25	4.0	2	24	1	6	nw.	V. L. Snyder.
Watford City	McKenzie	2,084	30	25.2	+15.4	57	17†	-10	12	0.46	-0.01	0.24	18	3.0	2	24	1	6	nw.	J. C. Zeller.
Willdow	Williams	2,258	16																.....	Fred E. Maucher.
Williston	Williams	1,878	64	21.3	+17.9	55	23	-9	12	0.26	-0.28	0.22	17-18	0.4	4	11	12	8	sw.	U. S. Weather Bureau.
Average for Western Division				23.4	+14.1	61	23	-18	31	0.51	+0.05	1.00	27-28	6.4	3	17	8	6	nw.	
Average for the State				21.8	+15.1	81	23	-26	6	0.37	-0.10	1.00	27-28	4.8	3	16	8	7	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

† Trace, precipitation 0.005 inch or less.

‡ And other dates.

4 Best available used for stations not equipped with recorders.

Daily Temperatures for January 1944

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	39	43	35	19	20	8	14	29	34	18	10	22	43	44	30	41	46	46	41	52	44	40	52	44	31	30	30	30	27	27	16	32.4	
	Maximum	17	10	9	7	7	-5	-10	3	12	4	-5	-9	11	12	7	11	10	32	23	26	16	12	16	18	16	24	16	11	5	14	-6	10.1
Bismarck Airport	37	40	34	20	23	10	20	40	37	18	12	28	51	46	29	44	48	47	45	51	43	42	47	47	38	34	27	33	29	28	20	34.6	
	Maximum	18	14	15	8	10	0	-1	9	16	9	-2	-8	13	12	12	17	14	31	21	30	20	17	17	21	23	13	18	10	5	4	0	12.5
Minimum	37	43	31	20	11	8	20	15	35	18	12	28	38	36	30	40	43	47	40	50	42	39	41	46	44	35	29	25	32	29	38	32.4	
Minimum	3	16	14	-8	-11	-2	-18	8	5	3	-12	-16	10	14	12	13	7	31	12	21	16	7	11	18	21	8	8	-1	-6	8	-8	5.7	
Carson	35	44	37	27	30	18	25	42	51	28	12	17	50	49	37	45	40	50	52	51	45	46	52	54	38	30	25	32	30	26	22	36.5	
	Maximum	11	17	21	10	8	6	6	9	12	6	1	-5	8	21	12	14	13	20	19	31	17	14	20	24	25	10	15	15	6	7	-7	12.5
Minimum	35	43	31	9	6	6	21	35	30	29	5	22	42	38	34	34	45	46	44	43	37	35	47	34	34	37	26	34	38	30	28	31	5
Crosby	13	17	8	-7	-7	-1	-9	13	9	3	-2	-7	12	12	14	15	15	14	17	32	18	12	16	21	13	14	19	18	10	8	-3	10.5	
	Maximum	35	43	32	11	5	5	13	32	30	15	9	21	40	30	16	33	44	39	36	48	40	33	45	42	31	31	22	26	32	32	22	28.8
Minimum	18	15	8	-2	-8	-14	-10	2	7	-4	-10	-8	14	13	10	15	17	28	15	32	22	13	17	23	18	7	4	13	8	8	0	8.7	
Devils Lake	41	50	34	29	26	13	29	41	34	18	12	32	49	50	30	41	50	47	52	52	46	43	55	48	35	28	27	32	26	25	18	36.0	
	Maximum	21	22	14	9	6	4	-2	16	15	3	0	-5	21	18	19	25	26	24	27	20	16	20	28	26	4	11	16	7	-4	-4	14.5	
Minimum	42	49	41	24	21	10	25	41	36	25	14	33	50	50	39	44	50	47	50	48	46	44	60	49	37	36	24	33	32	32	26	37.4	
Dickinson Airport	17	14	20	-1	-7	-5	-12	0	16	6	-5	-11	17	13	17	10	15	29	17	27	20	13	14	21	25	8	9	16	-2	-3	-10	9.9	
	Maximum	40	41	38	16	12	3	11	25	32	19	8	18	38	34	20	36	39	41	35	53	43	39	50	45	41	36	31	28	31	31	21	30.9
Minimum	18	12	11	7	-3	-12	-15	0	6	4	-5	-8	9	12	11	13	8	33	20	25	28	18	19	34	20	26	21	12	9	7	0	11.3	
Fargo Airport	41	44	37	19	10	10	17	36	33	16	17	26	46	32	24	38	49	43	38	48	41	34	51	46	32	34	21	31	39	35	28	32.8	
	Maximum	21	17	18	0	-6	-17	-12	2	7	3	-8	-8	14	13	12	15	12	34	17	32	20	14	17	20	19	16	10	14	10	-4	-4	10.1
Minimum	41	42	39	27	20	15	25	36	25	19	25	45	44	28	41	41	47	42	56	43	36	50	43	37	32	32	29	33	31	30	34	34.6	
Fullerton	13	10	20	9	14	-6	-8	-2	15	7	-5	-4	8	16	8	10	10	36	20	25	25	15	11	28	19	21	20	15	10	10	1	12.0	
	Maximum	42	44	34	19	17	7	24	37	34	17	9	28	47	45	19	30	44	43	47	48	42	38	52	47	31	31	21	32	29	29	18	32.7
Minimum	18	17	19	0	-10	-2	10	14	7	-6	-8	15	15	15	15	15	10	18	28	19	15	17	22	25	5	7	12	-1	-4	-9	16.3		
Garrison	42	49	33	30	27	16	31	41	36	18	16	37	55	52	34	49	53	54	54	49	46	56	45	33	30	23	30	27	24	24	24	24	37.4
	Maximum	18	20	9	3	-1	-5	-8	12	6	6	-9	-13	22	13	11	17	24	23	25	21	15	10	15	27	25	6	7	19	-7	-1	-10	5.8
Minimum	37	35	32	26	12	4	14	26	33	27	13	17	42	35	22	34	34	41	40	50	45	38	40	43	40	36	32	31	41	43	34	32.2	
Grafton	10	30	24	4	-7	-11	-12	0	10	10	-3	-9	7	15	4	0	12	31	17	17	28	22	14	27	20	25	11	10	10	9	6	10.7	
	Maximum	37	40	31	14	3	1	12	25	39	15	8	15	38	26	18	33	36	39	32	49	41	30	43	44	30	35	26	30	32	25	28	28.8
Minimum	12	10	10	-1	-7	-12	-14	1	5	-1	-5	-9	10	10	1	-4	5	30	18	24	26	14	15	28	22	20	15	4	1	-2	-3	7.3	
Grand Forks Airport	40	43	35	16	13	8	16	33	34	20	12	26	45	37	17	43	49	44	40	52	40	39	46	41	29	40	27	28	34	31	30	32	32.2
	Maximum	17	10	12	4	-3	-12	-15	0	10	7	-6	-5	14	11	12	11	12	32	19	25	24	15	17	20	17	22	15	12	5	3	-7	9.6
Minimum	41	47	24	15	8	5	28	35	35	15	13	31	46	38	24	37	49	44	46	47	43	41	53	42	32	45	25	37	45	38	25	34	34.6
Kenmare	13	21	16	-2	-5	-12	-11	-2	15	4	-7	-5	0	15	13	13	15	30	22	22	17	17	23	23	18	10	15	10	12	-3	3	10.2	
	Maximum	34	41	31	21	4	9	10	30	32	24	10	19	40	33	21	35	37	35	37	48	43	33	44	40	36	35	31	30	35	26	30	30.9
Minimum	11	11	21	4	-13	-19	-14	-1	3	5	-11	-13	10	7	1	1	16	25	18	27	18	8	14	21	14	13	5	9	3	4	-7	7.5	
Marmarth	42	44	36	30	31	19	32	42	36	27	19	38	50	50	42	47	49	47	56	52	49	46	56	47	36	33	29	34	25	26	23	28	28.8
	Maximum	16	12	23	8	12	0	-6	5	5	6	-10	-10	12	15	15	16	32	2	28	16	5	10	20	28	27	16	23	-9	0	-3	11.6	
Minimum	40	46	38	15	9	1	22	36	33	15	9	27	46	38	20	37	49	42	46	48	41	37	54	45	30	32	19	28	31	30	15	31	31.6
Minot Airport	19	24	5	-2	-13	-20	-10	15	13	1	-6	-5	19	17	15	16	15	28	19	29	21	15	24	27	24	12	9	15	12	11	-7	11.0	
	Maximum	44	49	42	32	32	20	28	42	44	35	24	32	54	51	36	47	50	49	54	51	47	45	54	51	42	32	23	33	30	26	22	39.4
Minimum	16	13	24	8	4	-1	0	11	9	10	2	-10	17	16	18	13	16	29	23	27	14	14	12	20	26	27	0	8	20	-3	4	-8	11.6
Pembina Airport	33	34	28	12	1	0	11	22	30	17	5	14	44	28	12	26	34	37	37	27	45	40	29	28	42	27	29	19	25	33	36	18	25.5
	Maximum	9	9	12	-1	-12	-15	-15	0	11	-1	-6	-12	10	11	-4	-4	13	25	10	24	26	14	16	27	18	15	4	0	6	6	1	6.7
Minimum	40	42	35	18	6	3	12	25	30	16	12	19	38	30	16	35	38	39	34	49	41	36	45	41	32	33	27	31	42	35	30	30.9	
Sharon	16	13	18	3	-5	-17	-16	0	8	5	-10	-11	10	15	9	8	8	33	20	28	22	16	17	24	21	23	16	14	9	7	2	9.4	
	Maximum	39	40	36	27	23	16	12	30	36	24	14	28	45	42	32	40	46	45	40	50	41	41	49	47	34	35	30	25	29	24	33.7	
Minimum	14	13	21	5	2	-3	-9	1	10	4	-10	-13	7	12	5	11	11	23	16	29	44	42	33	37	45	42	38	34	28	35	30	30.9	
Valley City	40	41	35	29	16	10	15	25	34	33	23	22	41	35	20	37	43	44	42	53	48	37	45	42	38	33	34	28	35	30	30	33.7	
	Maximum	15	11	20	8	4	-11	-15	1	11	9	-5	-5	12	16	16	12	15	33	24	28	27	20	14	20	22	27	22	16	15	9	6	13.7
Minimum	47	41	38	33	18	17	14	25	37	22	19	22	39	40	39	39	39	41	43	57	47	44	53	53	49	49	35	31	32	33	29	36	33.7
Wahpeton	14	27	11	4	5	-13	-15	-1	1	1	4	-7	-8	8	14	9	10	9	33	21	23	22	17	20	32	36	31	29	15	12	8	2	12.6
	Maximum	42	47	27	18	10	27	38	36																								

Daily Precipitation for January 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James					T.					T.			T.						.02							T.		.06				0.06
Casselton	Red.			T.		T.																				.02	T.	.28		.03			0.35
Cooperstown	Sheyenne						.03				T.									.03									.11				0.17
Courtenay	James										T.								.01									.03	T.				0.04
Devils Lake ^{1 5}	Devils Lake			T.		T.		T.			.01			T.					.02							.05	.04						0.12
Edgeley	James										T.								T.							T.	.12						0.20
Edmore	Devils Lake							T.			T.								T.								.02						0.12
Ellendale	James					T.								T.												.02	.12	.61					0.63
Fargo ^{1 5}	Red.		.01	T.	.04						.01	T.				T.	T.	.02	.03							.02	T.	.39	.05		.03		0.60
Forman	Sheyenne										T.								T.							T.	.21						0.21
Fullerton	James						.01				T.							T.	T.							.03	T.	.16	.33	T.	.07		0.60
Gackle	do										T.								T.							T.	T.	.06	.29		.20		0.55
Grafton	Red.										T.															T.	T.						T.
Grand Forks Airport ³	do		.01			T.					T.							T.		.03		T.				T.	T.		.30	.03			0.37
Hankinson ²	do																												.33				0.33
Hannah	Pembina										T.																.26						0.26
Hillsboro	Red.		T.		T.						T.									.02							T.			.24			0.26
Jamestown Airport ³	James			T.							T.								T.							T.			.16	.04		T.	0.20
Langdon	Pembina										.01									.01								.08					0.10
Larimore	Red.																																
Lisbon	Sheyenne																		T.							.01		.16	.08		T.		0.25
Mayville	Red.																																
McHenry	James		.02		.02						T.								.04								T.	.03		.03			0.14
McLeod	Sheyenne					.04					T.	T.															.23		.14	.14	T.		0.55
Oakes ²	James				T.														T.								T.	T.			T.		0.48
Park River	Red.		T.								T.	T.							T.							T.	T.	T.					T.
Pembina Airport ³	do										T.	T.							.09	T.	.01					.03	.02						0.15
Petersburg	do		.01																.02														0.03
Sharon	do		T.		.01	T.					T.	T.							.01							.01	T.	.02	.02	.02			0.07
Valley City	Sheyenne										T.	T.							.02						T.	.02		.18	.22		.02		0.48
Wahpeton	Red.		T.		.02	T.					T.								.01							.01	T.	.23	.10		T.		0.35
Middle Division																																	
Ashley ³	Missouri				T.	.01	.01				T.	T.							T.	T.						T.		.05	.03		.05		0.15
Bisbee	Devils Lake																				T.						.09						0.09
Bismarck ^{1 5}	Missouri		T.	T.	T.	.01	T.				T.	T.							T.	T.						.07	T.	.13	.01				0.22
Botineau ²	Mouse																		.08								.14	.03					0.25
Butte	do																		.07							.02	.20						0.29
Carson	Heart										T.																.10	.40	.33		.08		0.91
Center	Missouri					T.	T.				T.								.15							.09	.02		.14				0.40
Drake ²	Mouse					.03													.02								.16						0.21
Dunseith	do					T.					T.															.01	T.						0.01
Eckman	do					T.	.02																			.12	.23						0.37
Fessenden	James							.02																		T.							0.02
Fort Yates	Missouri																											.18	.12	T.	.15		0.45
Foxholm	Mouse				.01	T.					T.								.01							.40	.25						0.67
Garrison ³	Missouri				T.	T.					T.	T.							.03							.73	T.						0.76
Granville	Mouse				T.	T.													.01							.50	.15						0.66
Hansboro	Devils Lake										T.																.10	.15					0.25
Linton	Missouri							T.											T.										.30	.21		.21	0.72
Ladaddock	Sheyenne				.03														T.								.08		T.				0.11
Mandan ²	Missouri				T.						T.								T.								.08		.18				0.26
Max ²	do																		T.							.06	.48						0.54
McClusky	do																									.07							0.07
Minot Airport ³	Mouse				.05						T.								.01		T.					.57	T.						0.63
Mohall	do				.01															.02						.26	.05						0.34
Napoleon ²	Missouri																		.03														0.53
New Salem	Heart					T.					T.															.02	.08	.16					0.26
Pettibone	James		T.		T.						T.									.04							.02	.08	.06	.12			0.22
Rolia	Devils Lake							T.			T.															.10	.12	.13					0.35
Rugby	Mouse				.02						T.									.02							.20						0.24
Selkridge	Missouri					T.																						.70			.25		0.95
Steele	do		T.					T.											.02										.01	.12			0.15
Towner	Mouse			T.																													

51.05
NNT
1.53
No. 2

Nat'l Hist

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CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIII BISMARCK, N. D., FEBRUARY 1944 No. 2

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GENERAL SUMMARY

Temperatures were above normal in the eastern and western divisions and slightly below normal in the central division. For the state it was the fifth consecutive February with above normal temperature and following an unusually mild January, little suffering occurred. Moderate temperatures prevailed the first week and for 10 days at the close, but sub-zero temperatures occurred at most stations from the 8th to the 18th. The precipitation was unusually light in the eastern part of the state where two stations reported none during the 29 day period. A moderate snow cover was general over the central and western sections. No severe storms were reported and all important highways were open. The weather was favorable for outdoor work and livestock remained in good condition. Considerable livestock feeding was necessary.

TEMPERATURE

The mean temperature for the state was 11.2°, or 1.4° above the 1892-1944 average for February. The mean temperature for the eastern division was 10.6°; for the middle division, 9.7°; and for the western division, 13.4°. The highest mean temperature was 17.7° at New England, and the lowest, 4.6° at Willow City, making a range in mean temperature of 13.1°. The absolute range was 93°, from 50° at Medora on the 6th, to -43° at Golvea on the 11th. The average daily excess in temperature for the state since January 1, 1944, is 8.2°.

PRECIPITATION

The average precipitation for the state was 0.29 inch, or 0.18 inch less than the 1892-1944 average for February. In the eastern division the average amount was 0.19 inch; in the middle division, 0.34 inch; and in the western division, 0.34 inch. The greatest monthly amount reported was 0.77 inch at New England; there was none at Mayville or Milnor. The greatest amount recorded in any 24 consecutive hours was 0.51 inch at New England on the 8-9th. The accumulated deficiency in precipitation for the state since January 1, 1944, is 0.28 inch. The average snowfall was 4.3 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	4	3	3	1	5	26	6	3	1	5	4	1	7	2	1	..	1	..	1	..	1	..	1	4	2	1	6	9	18	16	..
Lunar halos	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Solar halos	1	..	..	..	..	..	..	1	..	2	..	2	2	1	..	1	..	1	..	1	1	..	..	..	..	..	..	..
Sleet	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thundrstm.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.81	10	29.66	6	8.5	26	nw.	8	85	88	75	80	61	1585
Devils Lake	30.79	10	29.53	23	8.4	25	nw.	19	94	95	77	81	62	1619
Fargo	30.79	10	29.60	23	11.6	31	n.	17	79	79	65	72	61	1944
Williston	30.84	10	29.58	6	6.5	21	n.	14	85	89	72	67	59	1419

† And other dates.

COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	10.0	62	-45	0.59	0.77	0.37	0.58	4.9	4	14	7	8	
1893...	-0.3	52	-41	1.01	0.51	0.22	0.58	5.7	4	12	7	9	
1894...	8.0	55	-54	0.28	0.23	0.16	0.22	2.3	2	14	9	5	
1895...	5.9	65	-40	0.33	0.41	0.33	0.36	3.6	4	13	7	8	
1896...	14.3	64	-50	0.56	0.29	0.38	0.41	4.3	3	12	9	8	
1897...	6.1	52	-29	1.14	1.05	1.30	1.16	11.5	7	12	7	9	
1898...	13.3	65	-40	0.46	0.46	0.46	0.46	4.5	3	13	8	7	
1899...	0.4	60	-34	0.22	0.16	0.22	0.20	1.9	3	14	8	6	
1900...	1.3	46	-48	0.20	0.55	0.66	0.47	4.5	4	12	9	7	
1901...	7.1	60	-48	0.32	0.30	0.31	0.31	2.9	3	15	7	6	
1902...	12.1	51	-31	0.73	1.10	1.12	0.98	6.7	6	10	6	12	
1903...	3.1	46	-33	0.48	0.25	0.41	0.38	3.7	3	19	4	5	
1904...	-2.1	52	-49	0.81	0.56	0.69	0.69	7.6	5	13	6	10	
1905...	8.2	64	-42	0.25	0.31	0.37	0.31	2.9	2	19	4	5	
1906...	9.8	57	-46	0.20	0.07	0.28	0.18	1.4	2	13	8	7	
1907...	10.7	58	-38	0.36	0.21	0.42	0.33	2.8	3	15	7	6	
1908...	13.8	62	-49	1.56	0.68	0.87	1.04	10.1	5	12	7	10	
1909...	9.6	56	-34	0.28	0.36	0.37	0.34	3.7	4	11	7	10	
1910...	3.4	56	-34	0.57	0.40	0.81	0.59	5.6	4	14	7	7	
1911...	7.3	55	-50	0.84	0.74	0.52	0.70	8.0	3	15	8	5	
1912...	11.8	48	-38	0.19	0.18	0.09	0.15	1.7	2	10	9	10	
1913...	8.5	64	-33	0.08	0.09	0.09	0.09	1.0	2	12	9	7	
1914...	1.0	57	-44	0.34	0.28	0.40	0.34	3.8	3	12	8	8	
1915...	17.4	50	-47	1.32	0.27	0.26	0.62	6.1	3	9	5	14	
1916...	6.4	55	-20	0.41	0.45	0.58	0.48	4.8	4	14	8	7	
1917...	-0.7	61	-39	0.84	0.58	0.55	0.66	7.1	5	10	8	10	
1918...	10.8	60	-48	0.20	0.16	0.29	0.22	2.3	3	13	9	6	
1919...	7.7	58	-41	0.68	0.73	0.44	0.62	6.5	5	10	8	10	
1920...	12.5	53	-40	0.38	0.25	0.28	0.30	3.2	3	11	9	9	
1921...	19.9	64	-36	0.52	0.39	0.25	0.39	3.8	3	11	10	7	
1922...	0.7	45	-33	1.41	1.17	1.00	1.19	12.8	5	13	6	9	
1923...	4.1	48	-39	0.78	0.64	0.51	0.64	7.2	4	13	7	8	
1924...	20.3	67	-40	0.39	0.43	0.35	0.39	4.2	3	14	6	9	
1925...	16.5	62	-27	0.48	0.30	0.08	0.29	3.6	3	10	9	9	
1926...	22.3	58	-39	0.47	0.44	0.31	0.41	3.7	4	9	9	10	
1927...	13.3	50	-19	0.49	0.31	0.27	0.36	3.1	4	12	7	9	
1928...	18.8	59	-31	0.13	0.06	0.15	0.11	1.2	2	14	8	7	
1929...	2.8	44	-19	0.30	0.28	0.30	0.29	3.3	4	12	8	8	
1930...	21.7	63	-44	1.41	1.15	0.97	1.18	11.7	6	11	8	9	
1931...	28.0	62	-30	0.34	0.20	0.31	0.28	2.9	2	14	6	8	
1932...	13.6	69	-31	0.30	0.37	0.30	0.32	4.3	3	12	9	8	
1933...	7.9	58	-45	0.25	0.26	0.34	0.28	3.3	3	13	8	7	
1934...	19.5	61	-30	0.08	0.04	0.07	0.06	0.7	1	13	8	7	
1935...	24.0	63	-25	0.21	0.24	0.15	0.20	1.9	2	13	7	8	
1936...	-12.9	43	-60	0.90	0.70	0.50	0.70	9.1	6	12	8	9	
1937...	6.8	55	-35	0.83	0.40	0.25	0.49	6.6	4	12	9	7	
1938...	7.2	60	-35	0.71	0.63	0.71	0.68	8.6	5	11	7	10	
1939...	-0.8	51	-46	0.85	0.60	0.45	0.63	9.7	5	13	8	7	
1940...	15.0	52	-29	0.63	0.59	0.60	0.61	7.8	3	12	8	16	
1941...	12.2	57	-40	0.23	0.18	0.24	0.22	2.8	3	12	8	8	
1942...	14.1	57	-30	0.19	0.30	0.58	0.36	4.6	5	6	9	13	
1943...	15.1	62	-32	0.75	0.42	0.33	0.50	6.4	5	11	9	8	
1944...	11.2	50	-43	0.19	0.34	0.34	0.29	4.3	4	13	7	9	
Period	9.8	69	-60	0.54	0.43	0.43	0.47	5.0	4	12	8	8	

NAT.
HIST.

Climatological Data for February 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	8.4	-0.5	36	2	-30	11	0.31	-0.17	0.14	4-5	3.4	4	9	17	3	nw.	Soo Line Agent.
Casselton	Cass	934	48	12.6	+3.5	38	21	-24	11	0.15	-0.44	0.15	6	2.0	1	22	3	4	s.	C. Hayford.
Cavalier	Pembina	894	34	7.6		35	18†	-24	11†	0.27	-0.24	0.15	4-5	3.8	5	11	5	13	nw.	City Light & Power Co.
Colgate	Steele	1,180	11																	O. M. Jensen.
Cooperstown	Griggs	1,423	47	12.2	+4.4	37	21	-30	11	0.11	-0.41	0.07	5	1.5	2	16	3	10	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	14							0.15	-0.43	0.15	6	2.0	1	5	17	7	nw.	G. H. Hanawalt.
Devils Lake	Rainey	1,478	47	9.2	+4.1	33	28	-26	11	0.12	-0.39	0.04	4	1.5	6	8	10	11	sw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	11.5	-1.3	34	24	-27	11†	0.10	-0.38	0.06	5	1.5	2	11	10	8	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,524	20	7.6	+2.8	34	2	-32	11	0.20	-0.21	0.05	25	4.7	5	16	9	4	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	10.8	-2.3	35	24	-28	12	0.48	-0.01	0.28	5	5.5	3	16	5	8	n.	J. E. Demmer.
Fargo Airport, 24 mi. NNW	Cass	895	17	11.8	+3.7	40	25	-22	12	0.16	-0.55	0.11	6	1.9	5	6	11	12	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	12.7	+2.8	36	2	-23	11†	0.42	-0.08	0.32	5	5.2	3	15	9	5	n.	Helge Dyse.
Fullerton	Dickey	1,439	46	11.2	-1.2	35	24†	-28	12	0.47	-0.24	0.25	5	4.7	3	10	13	6	nw.	F. O. Alin.
Gackle	Logan	1,951	14	11.4		35	3	-32	11	0.12	-0.33	0.12	6	1.8	1	12	10	7	w.	Jack Dixon.
Grafton	Walsh	827	52	12.2	+4.9	36	20	-21	11	0.14		0.05	4-5	1.9	5	19	4	6	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	10.2	+2.5	37	20	-23	11	0.08	-0.48	0.04	16-17	4.0	6	9	10	10	n.	University of N. Dak.
Grand Forks Appt., 24 mi. W	Grand Forks	832	4	9.6		36	20	-24	11	0.14		0.05	4-5	1.9	5	19	4	6	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	13.0	-1.1	43	25	-24	13	0.20	-0.34	0.08	5†	3.0	3	16	3	10	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	5.4	+2.8	30	18†	-31	11	0.16	-0.43	0.16	25	2.0	1	10	9	10	sw.	A. E. Prior.
Hillsboro	Traill	901	44	11.6	+1.4	38	2	-28	12	0.10	-0.45	0.10	6-7	1.0	1	9	10	10	ne.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	52	11.0	+1.1	35	2	-30	12	0.30	-0.29	0.16	6	4.1	3	16	2	11	w.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE	Stutsman	1,494	4	9.0		36	2	-32	11	0.23		0.14	6	3.9	5	15	5	9	n.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	10.5		38	2	-34	11	0.11		0.07	6	1.8	2	12	8	9	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	8.0	+3.2	35	20	-29	10†	0.27	-0.36	0.05	5	2.8	12	11	10	8	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	10.0	+2.3	42	25	-24	11	T.	-0.55	T.	4†	T.	0	23	3	3		Chas. Ouradnik.
Lisbon	Ransom	1,091	40	13.4	+1.8	39	2	-28	12	0.30	-0.29	0.13	6	6.5	3	17	1	11	nw.	J. O. Halverson.
Mayville	Traill	975	48	13.1	+3.3	36	20†	-25	12	0.00	-0.44	0.00		0.0	0	15	3	11	nw.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	8.3	+2.9	35	2	-33	11	0.08	-0.37	0.04	4	1.4	3	12	7	10	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	33	14.0	+1.0	40	25	-30	12	0.33	-0.23	0.18	6-7	3.3	3	17	6	6	sw.	J. G. Carlson.
McVie	Nelson	1,467	14							0.16		0.09	4-5	2.0	2	8	18	3	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	11.0		39	25	-27	11	0.00	-0.53	0.00		0.0	0	17	12	0	nw.	E. W. Wilson.
Oakes	Dickey	1,318	15	9.0	-3.9	35	21	-31	12	0.27	-0.19	0.10	5†	4.5	3	12	4	13	nw.	F. H. Murray.
Park River	Walsh	998	40	8.4	+0.7	34	2	-24	10†	0.04	-0.38	0.03	5	0.6	2	17	7	5	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	6.6	+3.8	30	18†	-24	15	0.25	-0.37	0.10	4	4.0	6	7	12	10	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	9.9		34	2	-28	11	0.09	-0.41	0.07	7	0.8	2	11	13	5	sw.	T. M. Rykken.
Sharon	Steele	1,516	20	10.8	+1.3	37	2	-26	11	0.08	-0.40	0.08	6	0.9	2	8	10	11	ne.	Nels O. Greifshelm.
Valley City	Barnes	1,245	38	15.0	+3.5	42	27	-23	12	0.31	-0.15	0.16	5-6	4.1	4	14	8	7	nw.	I. C. Robertson.
Wahpeton	Richland	962	52	15.4	+3.0	42	25	-27	11	0.13	-0.34	0.11	6-7	3.0	3	13	12	4	nw.	W. J. Cavanaugh.
Average for Eastern Division				10.6	+1.6	43	25	-34	11	0.19	-0.35	0.32	5	2.6	8	18	8	8	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	8.4	-3.0	32	2†	-34	11	0.08	-0.37	0.05	9-10	4.0	4	15	7	7	sw.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	9.4	+2.9	37	2	-30	11	0.31	-0.05	0.29	25	4.0	2	18	4	7	w.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	12.5	+0.9	37	20	-32	11†	0.35	-0.04	0.15	9-10	4.8	6	8	8	13	e.	U. S. Weather Bureau.
Bismarck Appt., 24 mi. SE	Burleigh	1,650	5	10.4	+1.9	35	20	-34	11	0.36	-0.10	0.12	4-5	5.8	9	8	8	13	e.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	9.9	+5.0	37	4	-34	11	0.52	+0.16	0.28	24	5.2	8	17	2	10	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	11.1	-2.0	36	19	-31	11	0.58	+0.05	0.22	5	6.5	4	14	4	11	sw.	R. L. Williams.
Carson, 24 miles SW	Grant	2,500	32	14.0	-0.5	40	6	-27	11	0.08	-0.40	0.08	10	1.0	1	13	9	7	s.	J. W. Evans.
Center	Oliver	2,100	6	13.2		40	20	-39	11	0.42		0.18	4-5	7.4	9	8	13	8	nw.	Fred L. Heinz.
Drake	McHenry	1,634	15	8.2	-2.2	34	20	-32	11	0.29	-0.18	0.12	6	3.0	4	12	2	15	nw.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	48	6.8	+0.1	32	20	-27	11	0.43	+0.01	0.37	24-25	7.8	5	10	8	11	nw.	Hubert Downs.
Eckman	Bottineau	1,500	39	7.8	+0.3	34	20	-38	11	0.33	-0.04	0.17	24-25	4.5	4	13	8	8	nw.	E. R. Sherman.
Fessenden	Wells	1,610	32	9.9	+0.2	36	28	-30	10	0.32	-0.20	0.20	6	5.1	4	16	5	8	n.	John V. Zuber.
Fort Yates	Sioux	1,670	44	13.4	+0.8	42	6	-40	11	0.50	+0.04	0.30	9	10.0	2	19	5	5	se.	P. J. Jacobson.
Foxholm, 64 miles NE	Ward	1,657	23	10.2	-1.8	35	2	-31	11	0.60	+0.13	0.26	25	8.6	7	12	4	13	nw.	E. C. Bierbaum.
Garrison	McLean	1,911	67	10.8	-0.3	35	20	-34	11	0.58	+0.07	0.26	4-5	7.6	8	8	9	12	s.	Mae H. Vorachek.
Granville	McHenry	1,504	37	9.6	-0.4	35	2	-35	11	0.19	-0.24	0.05	5†	3.6	4	15	2	12	nw.	Fred Roble.
Hansboro	Towner	1,597	36	5.8	-0.3	31	20	-32	11	0.18	-0.32	0.18	25	3.4	1	16	4	9	nw.	W. E. Disher.
Harvey	Wells	1,596	41							0.23	-0.22	0.16	6	5.5	4	9	11	9	n.	Orville Hoksche.
Leeds	Benson	1,515	4	9.4		34	28	-29	11	0.16		0.12	7	4.0	2	9	11	9	w.	John Dulmage.
Linton	Emmons	1,711	27	11.2	-2.6	36	6†	-42	11	0.46	+0.04	0.20	9	7.4	6	11	11	7	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	9.0	-1.2	34	28	-37	11	0.19	-0.21	0.05	1†	2.7	6	10	9	10	nw.	A. T. Felland.
Mandan, 14 miles SW	Morton	1,750	30	10.8	-1.8	35	2†	-32	11	0.46	+0.07	0.32	5	6.9	2	14	1	14	nw.	No. Gt. Plains Field Sta.
Max	McLean	2,093	15	8.4	-1.2	36	20	-34	12	0.23	-0.22	0.06	6†	3.4	5</					

Climatological Data for February 1944-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours 4	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Elbowoods	McLean	2,082	50	12.2	+0.1	40	20	-38	11	0.31	-0.08	0.05	6†	6.3	9	11	6	12	ne.	H. W. Case.
Epping	Williams	2,224	33	15.6	+6.2	43	3	-26	17	0.34	-0.06	0.19	25	4.5	3	14	5	10	se.	T. Beachler.
Fairfield, 94 miles N.	Billings	2,650	7							0.11	-0.31	0.05	22	1.9	5	16	4	9	nw.	Mrs. Edith Lar-on.
Fryburg, 2 miles N.	Billings	2,790	25	16.0		46	6	-22	11†	0.24	-0.21	0.09	4	2.2	6	9	8	12	sw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	13.8		46	6	-43	11	0.24		0.09	16-17	5.5	7	7	9	13	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35																	John S. Sorenson.
Hettinger	Adams	2,675	36	15.6	-0.9	42	6	-35	11	0.27	-0.16			4.0		13	9	7	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	9.2	0.0	41	1†	-29	11†	0.52	+0.13	0.19	4	7.4	5	15	3	11	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	15.6	-1.6	44	6	-35	11	0.34	-0.07	0.25	9-10	5.9	5	12	7	10		S. P. Grane.
Medora	Billings	2,271	28	17.4		50	6	-31	11	0.29	-0.10	0.11	4	4.5	6	15	5	9	sw.	Harry Roberts.
Mott	Hettinger	2,424	36	14.6	+0.5	44	6	-38	11	0.11	-0.37	0.07	9	1.7	3	18	6	5	nw.	P. G. Wick.
New England	Hettinger	2,621	49	17.7	+3.2	45	7	-38	11	0.77	+0.28	0.51	8-9	9.4	3	10	7	12	ne.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		14.9			45	6	-36	11	0.23		0.09	4-5	2.3	7	17	2	10	sw.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	11.2	+2.5	35	2	-41	11	0.22	-0.17	0.09	4-5	2.8	9	9	15	5	nw.	C. E. Shubert.
Portal	Burke	1,954	38	8.0	+1.8	42	1	-36	10†	0.53	+0.15	0.24	24	7.5	3	13	9	7	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	8.6	-3.2	34	3†	-38	10	0.63	+0.18	0.24	6	9.0	3	9	11	9	ne.	Geo. B. Gee.
Richardton, 14 miles N.	Stark	2,467	27	14.6	-0.1	43	6	-22	11	0.31	-0.10	0.15	9-10	5.9	5	9	8	12	sw.	Assumption Abbey.
Ryder	Ward	2,108	15							0.23	-0.25	0.07	4-5	3.3	4	15	2	12	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	10.1	+1.5	41	20	-39	12	0.30	-0.15	0.17	4	4.2	6	9	10	10		H. J. Bugge.
Stanley	Mountrail	2,253	6	9.5		39	2	-33	11	0.69		0.21	21	9.2	6	7	13	9	sw.	Leroy Edwards.
Tagus	Mountrail	2,179	15							0.10	-0.32	0.08	22-23	2.8	2	16	6	7	nw.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15							0.55	+0.18	0.20	24	7.5	6	7	7	15	w.	H. Francis Cannon.
Trotters	Golden Valley		18							0.22	-0.16	0.11	4	3.2	6	0	21	8	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	11.3		40	2	-38	11	0.25		0.12	6	4.2	6	16	5	8	ne.	V. L. Snyder.
Watford City	McKenzie	2,084	30	16.9	+3.2	42	2	-31	11	0.35	-0.08	0.26	4	5.5	4	12	9	8	sw.	J. C. Zeller.
Wildrose	Williams	2,258	16							0.47	+0.01	0.17	26	6.8	4	13	4	12	ne.	Fred E. Maucher.
Williston	Williams	1,878	64	16.0	+7.9	47	2	-27	11	0.54	+0.11	0.30	4-5	5.8	10	9	5	15	sw.	U. S. Weather Bureau.
Average for Western Division				13.4	+1.2	50	6	-43	11	0.34	-0.09	0.51	8-9	4.8	5	12	7	10	sw.	
Average for the State				11.2	+1.4	50	6	-43	11	0.29	-0.18	0.51	8-9	4.3	4	13	7	9	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

⁴ Best available used for stations not equipped with recorders.

Daily Temperatures for February 1944

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	16	32	32	27	10	31	27	25	3	-1	-4	4	30	14	5	18	10	15	28	27	25	19	27	31	30	25	28	28	28	28	20.4		
	Minimum	-3	10	12	5	-9	-2	7	-6	-15	-25	-34	-30	3	-7	-21	-5	-22	-17	-3	10	-2	6	5	8	17	3	-3	-7	17	...	...	-3.7
Bismarck Airport	Maximum	22	35	34	30	9	30	24	26	5	3	-2	17	32	19	10	30	13	23	29	35	23	21	32	30	29	26	29	27	28	...	...	23.1
	Minimum	-5	6	9	4	-2	2	4	-8	-14	-26	-34	-32	12	-10	-21	-10	-14	-13	-4	7	0	10	12	9	14	5	2	13	17	...	...	-2.4
Botineau	Maximum	30	35	36	37	15	22	17	20	10	1	-1	14	32	21	20	22	20	30	30	33	32	24	21	28	32	31	32	26	32	...	...	24.5
	Minimum	2	-2	12	4	-26	-11	1	4	-4	-33	-34	-20	0	5	-6	-27	-6	-28	-14	15	2	13	-4	8	-2	8	3	-10	9	11	-4.7
Carson	Maximum	33	33	32	30	25	40	38	34	15	0	-1	25	25	35	15	26	26	27	30	34	25	18	33	30	28	27	28	28	26	...	...	26.4
	Minimum	-5	15	12	9	-3	-2	18	10	2	-16	-27	-22	14	-5	-15	-15	-15	-13	0	10	2	8	8	12	18	16	5	18	13	...	...	1.7
Crosby	Maximum	43	43	35	28	14	18	32	17	5	-1	8	31	24	16	22	22	14	30	28	36	23	21	27	23	25	25	31	24	23	...	...	23.7
	Minimum	5	11	10	6	-14	5	7	-3	-17	-25	-30	-16	16	1	-15	0	-28	-1	12	4	4	4	10	11	17	1	9	17	10	...	...	0.4
Devils Lake	Maximum	26	32	26	20	6	16	8	18	3	-3	-1	12	30	9	9	21	2	29	26	32	25	20	26	31	25	29	32	33	31	...	...	19.8
	Minimum	0	9	11	-4	-13	0	1	-10	-13	-23	-26	-18	4	-9	-18	0	-19	-9	13	12	10	4	12	10	18	4	-2	6	12	...	...	-1.3
Dickinson Airport	Maximum	33	32	32	28	22	43	37	24	12	8	9	22	28	19	14	27	14	24	26	29	17	18	30	26	25	25	28	23	27	...	...	24.2
	Minimum	-4	16	16	2	-1	19	14	9	-3	-16	-25	-16	3	-7	-13	8	-10	-2	10	9	6	8	10	13	14	8	12	17	18	...	...	4.1
Dunn Center	Maximum	35	37	30	27	14	41	38	32	12	2	3	27	31	25	15	29	22	27	29	37	31	20	35	27	30	25	35	27	24	...	...	26.4
	Minimum	-6	13	11	13	-2	2	12	10	-14	-10	-38	-24	13	-12	-11	4	-20	-6	15	8	10	7	8	6	20	16	7	13	17	...	...	2.1
Fargo Airport	Maximum	24	33	27	31	9	19	17	22	3	1	-1	9	28	12	11	26	12	24	31	34	35	21	32	35	40	35	31	34	36	...	...	23.2
	Minimum	-4	9	6	6	-6	-2	-8	-14	-17	-22	-22	4	-4	-10	-1	-13	-17	5	15	14	10	16	11	24	15	6	7	9	...	...	0.4	
Fessenden	Maximum	28	33	32	25	12	20	16	5	2	2	16	16	28	18	10	22	18	25	28	33	20	21	29	31	31	30	34	36	28	...	...	22.4
	Minimum	-2	10	10	9	-11	-4	-1	-21	-18	-30	-21	-13	8	-16	-22	-2	-26	-15	10	8	10	0	11	10	14	13	-4	7	10	...	...	-2.6
Fullerton	Maximum	21	32	29	23	19	29	25	23	10	2	-2	29	6	8	20	10	13	28	30	30	30	20	30	35	32	32	30	32	35	...	...	21.9
	Minimum	-5	6	15	17	-4	-9	7	10	-15	-9	-25	-28	-5	-5	-10	-6	-10	-21	-14	20	10	12	8	9	22	21	5	7	15	...	...	0.6
Garrison	Maximum	24	33	30	28	7	24	23	19	8	-3	-4	25	30	14	16	26	9	25	30	35	20	19	33	34	31	24	28	28	26	...	...	22.1
	Minimum	-4	12	8	-1	-9	1	5	-11	-15	-21	-34	-25	13	-10	-16	0	-22	-6	16	8	8	5	12	13	17	4	4	17	17	...	...	-0.5
Golva	Maximum	34	36	34	35	28	46	39	37	25	5	-3	29	22	22	15	29	7	23	26	33	20	21	32	35	26	22	37	24	28	...	...	26.4
	Minimum	-7	20	9	4	-8	23	22	10	-2	-36	-43	-18	2	-10	-17	6	-22	2	5	11	7	8	12	10	10	14	2	1	18	...	...	1.2
Grafton	Maximum	22	35	31	23	10	15	12	18	6	4	4	15	34	18	13	26	23	34	32	36	34	24	33	31	29	26	29	34	34	...	...	23.6
	Minimum	-1	3	14	9	4	-3	-6	5	-10	-17	-21	-17	5	-3	-17	-5	-14	-14	14	10	17	5	15	8	20	7	0	2	9	...	...	0.7
Grand Forks Airport	Maximum	18	34	25	23	5	16	11	19	3	-1	0	8	32	9	11	24	11	31	30	36	31	20	32	28	31	28	27	31	34	...	...	20.9
	Minimum	-8	1	8	-2	-10	-4	-3	-11	-13	-19	-24	-21	3	-5	-19	-2	-15	-15	9	14	14	6	12	8	22	8	2	4	6	...	...	-1.7
Jamestown Airport	Maximum	18	36	34	24	6	24	13	19	4	3	-3	9	31	12	9	25	5	25	28	31	30	20	29	32	30	33	30	35	31	...	...	21.5
	Minimum	-6	3	14	4	-10	-4	3	-13	-18	-21	-32	-31	4	-9	-13	-3	-24	-20	-2	11	3	10	11	4	20	6	1	2	11	...	...	-3.4
Kenmare	Maximum	41	41	31	22	15	20	19	10	5	-3	4	29	28	10	16	24	14	29	29	32	22	22	30	23	26	21	26	24	22	...	...	22.0
	Minimum	-3	6	13	14	-18	-18	5	1	-14	-25	-29	-29	-5	-5	-20	-4	-24	-25	10	11	7	1	8	10	10	9	-2	10	5	...	...	-3.5
Langdon	Maximum	27	34	32	17	6	15	7	14	4	2	3	12	31	12	9	20	20	30	27	35	28	20	30	29	27	30	32	35	32	...	...	20.9
	Minimum	1	4	9	4	-19	-5	-12	-4	-19	-29	-29	-19	7	-13	-24	-5	-25	-15	10	7	15	-2	11	0	15	-1	1	8	1	5	-4.8
Marmarth	Maximum	34	35	34	35	35	44	42	33	23	5	-2	26	32	17	16	32	27	18	28	33	23	25	32	41	32	25	39	37	33	...	...	28.9
	Minimum	-16	21	9	11	-8	10	22	10	5	7	-35	10	10	-15	-16	0	-20	-14	16	4	-6	9	6	21	9	19	10	9	21	...	...	2.3
Minot Airport	Maximum	23	33	26	23	9	19	19	18	1	-7	-1	25	28	16	8	21	3	27	28	32	22	17	25	24	24	18	26	25	23	...	...	18.6
	Minimum	-4	12	13	-2	-16	7	5	-13	-17	-23	-23	-15	6	-10	-19	3	-23	2	17	15	1	-1	10	9	8	0	0	12	3	...	...	-1.4
Mott	Maximum	32	36	30	30	26	44	39	35	23	5	0	23	33	25	19	28	26	21	28	31	23	23	30	32	28	26	32	25	29	...	...	27.0
	Minimum	-5	10	13	11	-1	1	7	8	3	-8	-38	-24	6	-12	-20	-2	-12	-12	11	-1	3	10	8	15	15	13	12	20	25	...	...	2.2
Pembina Airport	Maximum	23	29	23	15	3	9	6	8	1	-5	5	15	30	4	12	-20	-2	30	27	30	25	22	29	25	27	25	23	27	30	...	...	17.8
	Minimum	-2	6	9	4	-17	-5	-15	-12	-15	-23	-22	-20	1	-12	-24	-4	-18	-14	10	7	8	0	11	4	16	2	-6	1	6	...	...	-4.6
Sharon	Maximum	20	37	33	21	8	19	11	18	4	0	1	10	33	17	9	23	21	29	28	34	32	21	30	31	29	30	29	31	31	...	...	22.1
	Minimum	-1	7	15	8	-10	-5	-1	0	-14	-13	-26	-23	0	-4	-18	-3	-15	-18	4	11	9	7	12	10	21	15	3	6	9	...	...	-0.5
Steele	Maximum	17	34	33	25	15	28	23	20	3	1	-12	0	30	20	3	21	17	10	28	32	26	17	30	31	31	25	27	29	...	...	20.4	
	Minimum	-10	3	6	15	7	-11	5	1	-20	-15	-38	-32	6	-14	-24	-8	-19	-24	7	6	1	5	4	1	17	13	-5	-6	7	...	...	-5.6
Valley City	Maximum	20	35	34	30	23	24	19	21	15	5	-2	6	33	30	19	23	20	24	32	34	33	32	31	32	33	32	42	39	34	...	...	26.0
	Minimum	-7	4	17	18	-4	-4	-5	13	-12	-5	-18	-23	1	-2	-5	-1	-8	-10	4	15	9	13	15	12	23	21	27	8	13	...	...	4.0
Wahpeton	Maximum	27	36	36	36	33	25	23	23	18	5	-1	12	31	27	12	30	29	27	32	34	33	33	34	37	42	39	34	36	31	...	...	28.2
	Minimum	-3	9	9	12	-6	8	5	14	-15	-9	-27	-22	2	-4	10	0	-9	-18	5	12	11	12	14	13	27	23	11	9	15	...	...	2.5
Williston	Maximum	42	47	33	29	16	35	43	25	9	1	8	34	29	20	21	26	11	32	33	42	25	24	35	26	26	27	31	28	26	...	...	27.0
	Minimum	10	17	13	4	-1																												

Daily Precipitation for February 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James					.14			.13	T.						T.																	0.31	
Cassett ¹	Red.					.15	T.		T.	T.																							0.15	
Cooperstown	Sheyenne					.07	T.		.04	T.																							0.11	
Courtenay	James					T.		.15		T.																							0.15	
Devils Lake ^{1 5}	Devils Lake					.04	T.	.04	.01	T.	.01				T.		.01	T.															0.12	
Edgeley	James					.06	T.	.04	T.						T.																		0.10	
Edmore	Devils Lake					T.	.04	T.	.03	.04	.04				T.																		0.20	
Ellendale	James					.28	.07								T.																		0.48	
Fargo ^{1 5}	Red.					.01	.02	.11	T.	.01	.01				T.																		0.16	
Forman	Sheyenne					.32	.04	.06							T.																		0.42	
Fullerton	James					.25	T.	.08																									0.47	
Gackle	do					T.	.12	T.		T.	T.																						0.12	
Grafton	Red.					.12	T.	T.	T.	T.					T.																		0.12	
Grand Forks Airport ³	do					.02	.03	T.	T.	.02	.02				T.			.04	.01		T.												0.14	
Hankinson ²	do					.08		.08																									0.20	
Hannah	Pembina					T.		T.		T.																								0.16
Hillsboro	Red.					T.		T.	.10	T.																							0.10	
Jamestown Airport ³	James					.01	.05	.14	T.	T.	.42	T.			T.																		0.23	
Langdon	Pembina					.04	.05	.02	.01	.04	.01					.01																	0.27	
Larimore	Red.					T.				T.																								T.
Lisbon	Sheyenne					.08	.13								T.																		0.30	
Mayville	Red.					.09																											0.00	
McHenry	James					T.	.04	.03	T.	T.	T.				T.		T.																0.08	
McLeod	Sheyenne					.15	.08		.10																								0.33	
Oakes ²	James					T.	.10	T.	.07	T.																							0.27	
Park River	Red.					T.	.03	T.		T.	.01																						0.04	
Pembina Airport ³	do					.10		.01	.06	.03	T.				T.			.04															0.25	
Petersburg	do					T.		T.	.07	T.	T.				T.																		0.09	
Sharon	do					T.	T.	.05	.03	T.	T.				T.																		0.08	
Valley City	Sheyenne					.16	.08	.02							T.																		0.31	
Wahpeton	Red.					.01		.11																									0.13	
Middle Division																																		
Ashley ³	Missouri					.01	.02	T.	T.	T.	.03	.02		T.	T.	T.	T.	T.	T.														0.08	
Bisbee	Devils Lake								.02																								0.31	
Bismarck ^{1 5}	Missouri					.07	.05	T.	.03		.09	.02			.02	.04	T.	T.															0.36	
Bottineau ²	Mouse					.07	.05	.08	T.		.02				.03	.02	T.	T.															0.52	
Butte	do					T.	.22	.15	T.	T.	T.				T.	.15	T.	T.															0.58	
Carson	Heart					T.																											0.08	
Center	Missouri					.18	.02			.02	.08					.03	.01	T.	.02														0.42	
Drake ²	Mouse					.09		.12								.05																	0.29	
Dunseith	do					.01																											0.43	
Eckman	do					T.	T.	.02	T.		T.					.01																	0.33	
Fessenden	James					.03		.20																									0.32	
Fort Yates	Missouri					.20				.30																							0.50	
Foxholm	Mouse					.05	.02	.18	.02	T.						.05																	0.60	
Garrison ³	Missouri					.20	.06	.09		.09						.05		.01															0.58	
Granville	Mouse					.05	.05	T.								.05	T.																0.19	
Hansboro	Devils Lake					T.		T.		T.																							0.18	
Linton	Missouri					.14				.12	.08					.02		.04															0.46	
Maddock	Sheyenne					.05	T.	.03	.05	.02	.01					.03		T.															0.19	
Mandan ²	Missouri					.32					.14					T.	T.																0.46	
Max ²	do					.03	.06	.06										.04															0.23	
McClusky	do					.13		.11		.03						.02																	0.31	
Minot Airport ³	Mouse					.08	.01	.09	.01	T.	.01					.06																	0.38	
Monall	do					.08	.05	.11	.06							.03																	0.44	
Napoleon ²	Missouri					.10	.08			T.	.08					.03																	0.31	
New Salem	Heart					.09				.06						.06																	0.21	
Pettibone	James					T.	T.	.21																									0.21	
Rolla	Devils Lake					.02	.06	T.	T.	.03	.02					T.	T.																0.36	
Rugby	Mouse					.10	T.	.20		.10						.01																	0.46	
Selfridge	Missouri					.03	.12			.17							.10	T.															0.42	
Steele	do					.04		.03	.01		.02																						0.14	
Towner	Mouse					.05																												

51.05
L N N T
1.53
10.3

Nat'l Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

MAY 3 1 1944

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIII BISMARCK, N. D., MARCH 1944 No. 3

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

The month of March was cold, averaging colder in the middle and western sections than in the eastern. There were no extremes of temperature but it was the coldest March since 1913. It was the fifth consecutive year with March snowfall above normal. This year it was 4.0 inches above the average, and nearly half the days were cloudy. A storm of blizzard proportions over the eastern part of the state on the 5th and 6th was caused by a deepening southwest LOW moving northeastward and centering over the Red River Valley with attendant maritime polar air overriding continental polar air. The result was a continuous heavy snowfall with strong winds over this period which piled the snow into huge drifts, cut visibility to zero, and necessitated the suspension of traffic and the closing of schools and some business firms. Another period of general snowfalls, winds and blustery weather was from the 26th to the 31st. Because of light snow at the beginning of the month with some freezing drizzle, highways, streets, and walks were in a very slippery condition and numerous accidents were reported. By the close of the month, there was some concern as to feed shortage in some sections with heavy yard feeding of livestock necessary since most of the ranges were snow covered the greater portion of the month. Generally speaking, the moisture was very beneficial after the dry winter months. On the 31st the small streams over the western portion began to break up their ice sheet which was unusually heavy, averaging nearly 24 inches thick. The thick ice caused ice jams on the Knife and Heart rivers with some inconvenience due to flooding of bottomlands and a portion of some highways and bridge approaches on these streams.

—M. S. C.

PRECIPITATION

The average precipitation for the state was 0.81 inch, or 0.02 inch more than the 1892-1944 average for March. In the eastern division the average amount was 1.08 inches; in the middle division, 0.68 inch; and in the western division, 0.66 inch. The greatest monthly amount reported was 2.41 inches at Cavalier; the least was 0.17 inch at New Salem. The greatest amount recorded in any 24 consecutive hours was 0.88 inch at Timmer on the 13th. The accumulated deficiency in precipitation for the state since January 1, 1944, is 0.26 inch. The average snowfall was 10.2 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.61	18	29.42	23	12.5	38	w.	11	86	87	74	77	49	1469
Devils Lake...	30.59	14	29.58	23	11.1	33	n.	29	91	92	79	79	50	1545
Fargo.....	30.61	18	29.30	24	14.4	40	n.	7	84	88	72	77	53	1389
Williston.....	30.59	13	29.40	23	8.0	28	nw.	11	85	89	70	67	51	1460

† And other dates.

TEMPERATURE

The mean temperature for the state was 16.7°, or 6.9° below the 1892-1944 average for March. The mean temperature for the eastern division was 18.4°; for the middle division, 15.3°; and for the western division, 16.4°. The highest mean temperature was 22.8° at Wahpeton, and the lowest, 10.3° at Portal, making a range in mean temperature of 12.5°. The absolute range was 78°, from 53° at Medora on the 31st to -25° at Parshall on the 18th. The average daily excess in temperature for the state since January 1, 1944, is 3.2°.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	19	15	2	3	11	..	..	2	1	..	2	..	3	1	..	2	8	..	1	6	7	17	1	2	2	6	2	..	1	..	4
Lunar halos...	..	..	..	..	..	..	..	2	1	..	..	1	..	..	..	2	..	..	..	..	7	1	..	1	..	..	..	..	..	..	..
Solar halos...	..	..	..	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sleet.....	25	1	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Thunderstms.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..

COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	24.2	66	-35	0.87	0.98	0.65	0.83	1.9	4	12	8	11
1893...	13.9	68	-35	1.10	1.30	0.46	0.95	10.0	5	13	7	11
1894...	24.8	69	-22	1.20	1.71	1.43	1.45	10.1	5	12	9	10
1895...	23.2	75	-35	0.07	0.21	0.24	0.17	1.0	2	16	10	5
1896...	15.7	70	-35	1.19	1.15	1.06	1.13	8.0	8	12	10	9
1897...	11.9	58	-48	1.15	1.04	1.90	1.36	8.0	7	15	7	9
1898...	21.3	79	-24	0.77	0.80	0.80	0.79	6.7	5	13	8	10
1899...	7.5	72	-30	1.23	0.96	0.68	0.96	10.0	5	12	10	9
1900...	20.3	77	-24	0.96	0.96	1.11	1.01	8.5	5	14	7	10
1901...	25.3	85	-32	0.95	0.85	0.78	0.86	5.2	5	15	8	8
1902...	27.4	85	-25	2.75	2.90	2.55	2.73	11.7	8	10	6	15
1903...	22.1	60	-24	0.78	0.44	0.42	0.55	5.1	3	12	6	13
1904...	18.2	64	-26	1.26	1.33	1.64	1.41	11.5	5	11	6	14
1905...	32.5	81	-25	1.09	0.85	0.32	0.75	2.3	4	11	8	12
1906...	18.5	67	-34	0.31	0.39	0.44	0.38	3.1	3	15	6	10
1907...	23.1	83	-20	0.57	0.58	1.00	0.72	5.1	4	14	9	8
1908...	21.1	68	-31	1.17	0.94	1.53	1.21	12.1	8	10	9	12
1909...	24.0	61	-27	0.34	0.40	0.26	0.33	2.7	4	10	9	12
1910...	41.3	90	-7	0.83	0.93	1.08	0.94	0.3	3	18	8	5
1911...	30.6	78	-18	0.14	0.26	0.29	0.23	1.6	2	16	10	5
1912...	15.4	65	-28	0.28	0.32	0.52	0.37	3.6	3	17	8	6
1913...	17.2	70	-31	0.82	0.73	1.00	0.85	8.2	6	12	9	10
1914...	25.5	76	-20	0.83	1.06	0.75	0.88	9.2	5	10	9	12
1915...	22.9	63	-23	0.38	0.20	0.07	0.22	2.0	2	16	6	9
1916...	20.3	69	-45	1.43	1.82	1.00	1.42	13.5	6	11	9	11
1917...	22.2	67	-39	0.44	0.33	0.37	0.38	3.9	3	13	10	8
1918...	35.0	82	-15	0.32	0.46	0.42	0.40	2.9	2	16	8	7
1919...	17.8	67	-35	0.63	0.93	0.78	0.78	6.2	4	12	9	10
1920...	22.4	67	-32	0.46	0.83	1.20	0.83	7.1	4	15	8	8
1921...	25.2	75	-22	1.07	1.02	0.81	0.97	9.1	6	9	12	10
1922...	25.8	60	-30	0.96	0.67	0.50	0.71	6.4	4	12	7	12
1923...	18.3	65	-35	0.34	0.44	0.35	0.38	4.8	4	10	10	11
1924...	25.5	58	-20	0.32	0.36	0.75	0.48	4.4	4	10	9	12
1925...	27.4	75	-26	0.74	0.56	0.75	0.68	6.0	4	14	9	8
1926...	25.8	83	-23	0.35	0.19	0.17	0.24	1.8	3	13	10	8
1927...	30.4	77	-10	0.90	0.78	0.47	0.72	6.5	5	13	8	10
1928...	28.1	85	-17	0.69	0.55	0.31	0.52	4.8	3	15	8	8
1929...	30.5	77	-15	0.68	0.65	1.02	0.78	5.3	5	12	8	11
1930...	26.1	62	-17	0.17	0.05	0.05	0.09	0.9	1	17	8	6
1931...	25.7	63	-24	0.99	0.85	0.99	0.94	4.8	5	11	8	12
1932...	18.9	64	-30	0.52	0.60	0.80	0.64	6.0	6	10	11	10
1933...	28.5	70	-14	0.46	0.41	0.49	0.45	3.7	3	14	10	7
1934...	26.3	74	-12	0.43	0.34	0.71	0.49	3.6	4	11	11	9
1935...	26.3	75	-37	2.00	0.89	0.90	1.26	7.0	5	9	11	11
1936...	25.4	61	-27	0.73	0.75	0.94	0.81	8.1	6	10	11	10
1937...	24.8	72	-20	0.42	0.34	0.42	0.39	4.3	3	12	11	8
1938...	33.1	72	-14	0.63	0.57	0.58	0.59	2.5	4	13	10	8
1939...	23.3	81	-29	0.33	0.41	0.42	0.39	5.3	3	16	8	7
1940...	23.1	64	-26	1.19	0.71	0.72	0.87	9.1	7	9	9	13
1941...	24.5	68	-25	0.65	0.64	0.46	0.58	6.8	5	11	8	12
1942...	30.0	66	-8	2.77	1.72	1.01	1.83	12.8	9	9	8	14
1943...	17.0	77	-30	1.08	1.37	1.23	1.23	14.8	7	11	11	9
1944...	16.7	53	-25	1.08	0.68	0.66	0.81	10.2	8	7	9	15
Period	23.6	90	-48	0.83	0.78	0.76	0.79	6.2	5	12	9	10

NAT'L
HIST.

Climatological Data for March 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days					Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Carrington	Foster	1,579	46	14.8	-8.9	46	23	-18	18†	0.65	-0.04	0.28	13	10.1	6	8	9	14	w.	Soo Line Agent.
Casselton	Cass	934	48	22.2	-2.5	48	23	-12	9	1.05	+0.29	0.50	13	13.6	4	11	14	6	n.	C. Hayford.
Cavalier	Pembina	894	34	15.0	.....	48	23	-16	9	2.41	+1.65	0.60	5-6	28.5	9	7	6	18	n.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	.....	.....	.....	.....	0.52	-0.28	0.20	6†	8.7	5	13	10	8	ne.	O. M. Jensen.
Cooperstown	Griggs	1,423	47	19.0	-5.3	48	24	-17	18	0.90	+0.39	0.30	6	9.2	7	8	5	18	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	14	.....	.....	.....	.....	.....	.....	0.40	-0.44	0.18	29	4.8	4	7	15	9	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	15.2	-4.6	46	23	-12	18	0.98	+0.20	0.27	26-27	13.4	11	2	10	19	n.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,563	43	19.8	-7.5	45	23	-15	18	0.76	-0.07	0.28	14	10.9	5	4	17	10	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,524	20	14.4	-6.7	45	23	-23	9	1.03	+0.34	0.22	5	13.8	11	11	9	nw.	Mike Davis.	
Ellendale	Dickey	1,457	49	19.8	-7.4	46	10†	-14	18	0.90	-0.05	0.23	13	11.5	9	9	5	17	nw.	J. E. Demmuer.
Fargo Airport, 24 mi. NNW	Cass	895	17	20.2	-2.5	50	23	-15	9	1.26	+0.25	0.68	5-6	13.6	11	3	9	19	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	21.6	-4.4	48	23	-6	18	0.53	-0.27	0.20	29	6.8	10	8	9	14	nw.	Helge Dyset.
Fullerton	Dickey	1,439	46	21.3	-5.8	50	24	-11	18	1.20	+0.14	0.46	13	11.8	9	6	10	15	nw.	F. O. Alin.
Gackle	Logan	1,951	14	18.1	.....	44	23	-14	18	0.67	-0.18	0.30	28	7.0	4	3	14	14	w.	Jack Dixon.
Grafton	Walsh	827	52	19.2	-2.5	49	23	-17	9	2.04	+1.34	0.58	5-6	19.8	10	4	13	14	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	18.0	-4.5	48	23	-16	9	1.28	+0.50	0.48	5-6	18.5	14	11	10	10	nw.	University of N. Dak.
Grand Forks Apt. 24 mi. W	Grand Forks	832	4	17.7	.....	48	23	-18	9	1.43	.....	0.39	6-7	24.6	15	4	6	21	n.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	21.1	-7.5	52	23	-10	9†	0.98	+0.16	0.45	6	12.2	6	6	3	22	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	14.0	-5.2	40	11	-19	9	1.33	+0.61	0.32	24	20.7	6	9	6	16	nw.	A. E. Prior.
Hillsboro	Trall	901	44	19.8	-5.5	50	23	-14	9	1.29	+0.53	0.53	5-6	13.4	13	4	15	12	se.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	52	19.8	-4.6	46	23	-20	18	1.27	+0.37	0.40	5-6	17.6	5	7	7	17	nw.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	4	17.5	.....	45	23	-20	18	0.87	.....	0.35	13	10.4	10	5	5	21	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	17.2	.....	48	23	-20	18	0.84	.....	0.22	13	11.0	7	7	10	14	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	15.4	-4.4	45	23	-17	18	2.20	+1.42	0.41	23-24	20.4	14	9	9	13	n.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	17.8	-4.9	49	23	-15	9	1.63	+0.82	0.38	28	20.8	8	11	2	18	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	22.0	-5.3	51	23	-11	9	0.58	-0.15	0.27	13	8.7	9	5	5	21	nw.	J. O. Halverson.
Mayville	Trall	975	48	19.7	-5.0	49	23	-14	9	0.98	+0.29	0.32	6	13.5	12	5	6	20	n.	H. B. Adiecott.
McHenry, 3 miles NE	Eddy	1,509	22	15.8	-7.2	46	23	-20	9†	1.06	+0.37	0.34	5	14.7	10	4	11	16	n.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	33	20.9	-6.9	50	23	-14	9	0.57	-0.21	0.20	7	5.7	7	15	7	9	sw.	J. G. Carlson.
McVille	Nelson	1,467	14	.....	.....	41	21	-13	9	1.61	.....	0.48	6	27.4	8	2	17	12	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	18.2	.....	41	21	-13	9	0.85	+0.08	0.35	6	14.0	5	15	13	3	nw.	E. W. Wilson.
Oakes	Dickey	1,318	15	19.0	-8.7	48	23	-10	18	0.46	-0.34	0.16	14†	4.8	5	10	5	16	nw.	F. H. Murray.
Park River	Walsh	998	40	15.8	-7.0	46	23	-12	18	1.22	+0.56	0.32	23-24	16.6	9	12	5	14	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	14.6	-3.8	44	23	-22	9	1.62	+0.82	0.56	5-6	18.4	16	2	16	13	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	15.8	.....	47	23	-14	9	0.95	+0.22	0.34	23-29	10.8	9	7	12	12	nw.	T. M. Rykken.
Sharon	Steele	1,516	20	17.6	-6.6	49	23	-16	9	0.99	+0.37	0.21	6	11.2	11	1	13	17	nw.	Nels O. Grefsheim.
Valley City	Barnes	1,229	38	21.6	-4.7	47	23	-8	9	0.91	+0.22	0.15	6†	11.7	11	8	8	15	nw.	I. C. Robertson.
Wahpeton	Richland	962	52	22.8	-4.8	50	23	-14	9	0.66	-0.06	0.18	5-6	12.6	9	7	10	14	nw.	W. J. Cavanaugh.
Average for Eastern Division				18.4	-5.8	52	23	-23	9	1.08	+0.25	0.68	6-6	18.8	9	7	9	15	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	14.8	-10.1	42	10	-15	18	0.38	-0.45	0.10	13	7.6	10	5	7	19	nw.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	15.4	-7.1	44	10	-15	9†	1.79	+1.08	0.85	27	18.5	8	12	6	13	ne.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	18.7	-6.5	47	23†	-15	18	0.39	-0.48	0.11	13†	5.4	7	4	8	19	nw.	U. S. Weather Bureau.
Bismarck Airport, 24 mi. SE.	Burleigh	1,650	5	17.8	-4.1	48	31	-17	18	0.43	-0.46	0.18	13	6.6	8	4	8	19	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	13.8	-7.0	45	10	-19	9	1.85	+1.18	0.80	5-6	21.5	13	13	2	16	nw.	N. D. School of Forestry
Butte, 3 miles WSW.	McLean	1,880	18	15.5	-10.9	43	23†	-18	18	0.72	-0.10	0.20	24†	6.9	5	6	8	17	nw.	R. L. Williams.
Carson, 24 miles SW	Grant	2,500	32	16.6	-10.4	43	23	-19	18	0.45	-0.41	0.35	14	4.5	3	4	9	18	nw.	J. W. Evans.
Center	Oliver	2,100	6	17.6	.....	46	31	-23	18	0.50	.....	0.09	14	5.3	9	4	14	13	nw.	Fred L. Heinz.
Drake	McHenry	1,624	15	13.4	-11.3	44	23	-15	18	0.54	-0.16	0.11	27	5.7	12	7	2	22	nw.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	48	13.4	-7.1	33	10†	-16	18	0.86	+0.24	0.28	26	13.0	7	13	4	14	n.	Hubert Downs.
Eckman	Bottineau	1,500	39	12.7	-10.3	40	10	-20	4†	0.68	+0.12	0.18	5	8.0	9	9	8	14	nw.	E. R. Sherman.
Fessenden	Wells	1,610	22	16.6	-7.1	43	23	-18	18	0.57	-0.18	0.15	26	8.9	9	13	6	12	n.	John V. Zuber.
Fort Yates	Sioux	1,670	44	19.3	-7.9	45	31	-17	18	0.20	-0.61	0.14	13	3.0	3	17	5	9	nw.	P. J. Jacobson.
Foxholm, 64 miles NE.	Ward	1,657	23	13.1	-12.3	40	10	-18	18	0.96	+0.24	0.45	5-6	8.2	12	7	10	14	nw.	E. C. Bierbaum.
Garrison	McLean	1,911	67	15.6	-8.8	44	23†	-16	12	0.61	-0.18	0.16	5†	8.1	8	6	9	16	w.	Mae H. Vorachek.
Granville	McHenry	1,504	37	13.8	-10.7	40	23	-20	18	0.49	-0.05	0.12	5	5.9	7	19	3	9	w.	Fred Roble.
Hansboro	Towner	1,597	36	12.6	-8.1	41	22	-17	9	0.89	+0.01	0.56	26	14.2	7	8	11	12	nw.	W. E. Disher.
Harvey	Wells	1,596	41	.....	.....	.....	.....	.....	.....	0.42	-0.35	0.21	5-6	14.5	12	1	9	21	n.	Orville Holsch.
Leeds	Benson	1,515	4	15.6	.....	43	23	-16	9	0.74	.....	0.35	5	9.3	7	4	16	11	ne.	John Duhagne.
Linton	Emmons	1,711	27	18.3	-9.7	47	31	-15	18	0.82	+0.04	0.26	26	7.5	8	5	10	16	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	16.3	-8.0	44	23	-17	9	0.63	-0.01	0.14	26	8.2	9	6	9	16	nw.	A. T. Felland.
Mandan, 14 miles SW	Morton	1,750	30	17.2	-9.6	47														

Climatological Data for March 1944—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days			Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Elbowoods	McLean	2,082	50	18.0	-8.2	49	23	-19	18	0.61	+0.08	0.28	13	14.7	9	8	11	12	nw.	H. W. Case.
Epping	Williams	2,224	33	17.4	-9.6	46	31	-18	12	0.51	-0.06	0.26	5	10.0	4	14	6	11	se.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	7							0.75	+0.03	0.20	23†	3.7	8	9	7	15	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	18.8		47	23†	-15	12	0.68	-0.13	0.18	13	5.8	10	2	13	16	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	17.2	-10.4	46	31	-16	12	0.58	-0.17	0.15	30	7.8	11	3	8	20	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35	17.3	-5.1	49	23	-18	12	1.06	+0.38	0.80	5	12.7	6	10	10	11	sw.	John S. Sorenson.
Hettinger	Adams	2,675	36	17.8	-11.1	47	31	-11	12	0.28	-0.38	0.28	12-13	4.2	1	9	9	13	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	12.2	-11.0	43	9	-17	18	1.23	+0.58	0.56	5	13.5	14	10	7	14	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	19.8	-9.0	47	31	-13	12	1.03	+0.30	0.30	13	14.4	7	5	13	13	nw.	S. P. Grane.
Medora	Billings	2,271	28	21.6		53	31	-7	8†	0.26	-0.50	0.16	13-14	3.7	4	12	5	14	sw.	Harry Roberts.
Mott	Hettinger	2,424	36	17.6	-10.0	44	31	-19	18	0.33	-0.53	0.12	31	2.8	7	9	11	11	nw.	P. G. Wick.
New England	Hettinger	2,621	49	28.6	+2.5	47	31	-17	18	0.89	+0.08	0.30	15	11.0	8	11	8	11	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		3	19.4		49	31	-16	12	0.61		0.22	13-14	4.4	12	7	7	17	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	15.2	-10.1	44	31	-25	18	0.37	-0.21	0.16	5	4.5	9	2	20	9	nw.	C. E. Shubert.
Portal	Burke	1,954	38	10.3	-8.1	42	22	-22	12	1.37	+0.76	0.6	4	13.6	8	8	8	15	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	11.8	-13.7	35	18	-16	3	0.55	-0.15	0.28	5	8.0	2	9	13	9	ne.	Geo. B. Gee.
Richardton, 1 1/2 miles N.	Stark	2,467	27	16.6	-10.6	46	31	-13	12	0.71	-0.01	0.18	31	8.4	11	5	7	19	nw.	Assumption Abbey.
Ryder	Ward	2,108	15							0.30	-0.24	0.05	5†	3.5	10	8	6	17	nw.	S. C. Schellebaum.
Sanish	Mountrail	1,835	18	14.1	-10.7	48	9†	-20	12	0.79	+0.21	0.50	5-6	9.8	6	0	22	9	nw.	H. J. Bugge.
Stanley	Mountrail	2,258	6	12.5		40	22†	-21	18	1.03		0.46	4-5	9.8	6	10	10	11	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	15							0.30	-0.32	0.23	5	7.2	3	9	11	11	nw.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15																	H. Francis Cannon.
Trotters	Golden Valley		18							0.98	+0.21	0.25	12-13	9.7	12		19	11	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	15.8		45	31	-19	12	0.25		0.18	5	2.9	4	13	8	10	nw.	V. L. Snyder.
Watford City	McKenzie	2,084	30	19.1	-7.1	50	31	-15	12	1.38	+0.69	0.61	5	13.0	6	6	13	12	n.	J. C. Zeller.
Wildrose	Williams	2,258	16							0.78	+0.16	0.42	5	10.5	5	10	12	4	nw.	Jonathan Winkjer.
Williston	Williams	1,878	64	17.9	-5.0	48	31	-15	12	1.32	+0.63	0.73	4-5	14.7	15	3	8	20	nw.	U. S. Weather Bureau.
Average for Western Division				16.4	-9.4	53	31	-25	18	0.66	-0.10	0.80	5	8.0	8	7	9	15	nw.	
Average for the State				18.7	-6.9	53	31	-25	18	0.81	+0.02	0.88	13	10.2	8	7	9	15	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for March 1944																																		
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum.. 33	33	20	20	31	11	10	15	24	42	33	14	19	20	23	30	24	11	26	30	32	39	35	24	31	24	20	16	27	39	25.5			
	Minimum.. 25	14	-2	-8	8	2	-6	-10	-14	-22	-2	-7	3	7	9	3	-3	-15	-2	-3	17	15	20	5	-1	15	5	2	4	20	4.4			
Bismarck Airport	Maximum.. 35	33	21	21	28	15	14	18	30	41	32	13	13	16	21	35	28	14	29	29	36	36	47	37	22	31	24	21	23	35	27.3			
	Minimum.. 28	21	3	3	10	3	-2	-5	5	27	1	-6	2	6	2	1	-1	17	0	15	24	20	27	10	6	18	12	10	8	11	26	8.3		
Bottineau	Maximum.. 33	25	15	25	28	15	18	15	34	45	23	19	14	20	25	29	23	30	36	31	38	38	41	23	20	21	26	28	29	30	33	26.8		
	Minimum.. 14	14	0	-12	-10	3	-1	-10	-19	-8	15	-16	9	1	3	3	0	-18	-10	20	20	20	18	15	-16	-14	11	10	5	-5	2	0.8		
Carson	Maximum.. 36	32	27	20	22	14	10	15	23	41	32	9	12	18	32	30	13	32	34	34	36	43	39	20	30	23	20	21	32	41	25.8			
	Minimum.. 20	25	14	10	12	-2	0	-2	1	21	-4	-4	2	4	6	0	11	-19	0	13	21	20	23	14	-1	12	10	1	0	1	24	7.3		
Crosby	Maximum.. 20	20	12	26	20	14	14	18	37	39	13	0	8	18	25	34	31	28	31	28	39	45	38	30	15	18	24	24	25	35	28	24.7		
	Minimum.. 18	12	11	-7	6	-8	-11	6	23	-2	-21	-6	1	-2	8	6	-14	21	18	20	14	23	6	-7	-1	-2	2	-4	15	25	3.5			
Devils Lake	Maximum.. 31	31	12	26	23	14	12	10	24	41	30	8	14	16	24	28	21	17	32	29	38	40	46	34	17	29	27	18	21	28	31	25.0		
	Minimum.. 22	7	-4	-6	10	6	-5	-7	-10	24	-2	-9	-3	5	7	4	-3	-12	9	18	18	22	21	7	-1	6	15	11	5	3	8	5.4		
Dickinson Airport	Maximum.. 32	28	23	22	19	11	10	22	34	39	25	7	7	14	18	36	28	14	36	28	39	37	42	26	19	34	20	19	22	33	48	25.5		
	Minimum.. 25	17	12	11	1	-4	-3	-2	1	22	-3	-13	-3	4	5	-1	-12	9	20	22	10	26	10	5	13	9	6	0	9	25	7.3			
Dunn Center	Maximum.. 36	33	29	23	22	13	13	21	33	39	38	8	5	18	23	36	36	20	40	32	34	42	48	41	22	31	26	22	24	34	49	28.7		
	Minimum.. 22	19	9	4	8	-4	-3	-16	1	29	-6	-17	-4	4	8	2	-11	-16	14	23	22	13	23	12	4	16	8	-4	1	11	27	7.7		
Fargo Airport	Maximum.. 34	36	21	28	33	30	13	11	20	44	40	10	22	24	25	28	24	20	33	35	41	37	50	38	26	36	30	28	24	32	31	29.2		
	Minimum.. 26	14	-4	-1	21	11	-1	-10	-15	19	-4	-2	5	11	15	14	-4	-5	5	22	26	29	28	17	10	17	18	18	14	12	13	11.2		
Fessenden	Maximum.. 33	32	21	26	29	18	9	15	25	41	34	11	14	17	25	25	26	16	38	32	42	35	43	40	18	28	25	20	19	29	39	26.6		
	Minimum.. 22	19	6	-7	10	1	0	-10	-10	21	5	-9	-1	4	9	3	4	-18	5	20	19	22	24	15	2	10	9	12	3	-2	19	6.7		
Fullerton	Maximum.. 36	35	23	26	33	33	15	19	26	45	37	17	18	20	32	30	28	13	33	36	42	42	47	50	36	36	32	25	21	31	44	31.0		
	Minimum.. 27	28	10	2	17	8	5	0	-5	21	15	-1	6	11	13	9	15	-11	-7	10	18	25	28	24	7	22	9	14	11	9	19	11.6		
Garrison	Maximum.. 34	30	16	22	22	13	13	19	31	39	26	4	12	17	23	36	37	15	35	29	37	41	44	30	21	29	21	21	21	32	44	25.9		
	Minimum.. 22	13	-7	-9	7	-3	-3	-5	-5	21	-6	-16	-3	5	6	5	3	-6	2	9	23	21	18	30	-2	10	5	7	2	23	5.3			
Golva	Maximum.. 31	29	22	26	21	13	12	24	38	44	26	9	6	14	19	36	33	19	41	29	34	38	45	24	24	35	21	19	28	38	46	27.2		
	Minimum.. 23	17	15	16	2	-7	-8	0	4	20	-3	-16	-4	0	10	9	-4	13	2	10	11	22	11	5	13	3	0	-4	16	32	7.7			
Grafton	Maximum.. 32	31	14	24	28	29	16	13	24	47	43	12	22	27	26	29	22	30	31	39	43	49	47	21	27	35	30	25	29	31	29.9			
	Minimum.. 23	12	3	9	17	11	4	-1	-17	17	11	-8	-1	7	14	5	1	-9	12	16	18	19	24	18	6	0	25	19	13	8	9	9.9		
Grand Forks Airport	Maximum.. 31	30	12	26	33	22	11	8	22	45	36	5	21	24	29	24	29	21	32	31	39	38	48	35	21	23	34	31	23	28	31	27.7		
	Minimum.. 24	8	-2	5	12	6	0	-10	-18	18	-1	-6	4	8	8	5	0	-11	10	21	24	24	26	13	5	12	24	18	14	10	10	10.8		
Jamestown Airport	Maximum.. 35	33	22	25	32	15	14	18	26	44	35	15	15	20	24	29	26	15	35	30	40	40	45	38	26	33	27	21	20	31	42	28.2		
	Minimum.. 23	14	5	6	12	6	-1	-6	-14	21	0	-6	2	8	8	4	-6	-20	-1	14	22	19	25	8	4	14	11	12	9	5	17	6.6		
Kenmare	Maximum.. 25	24	12	23	15	13	13	18	43	37	10	0	10	18	24	34	15	25	34	28	34	42	38	15	12	18	21	23	25	37	40	23.3		
	Minimum.. 9	15	-6	-14	3	-8	-8	-8	7	11	7	-16	-11	-3	3	3	5	-17	-5	20	14	16	18	8	-8	-5	-1	5	-5	0	15	1.1		
Langdon	Maximum.. 26	28	15	22	20	16	15	12	22	42	38	8	20	25	25	35	30	19	30	28	34	39	45	41	20	23	33	24	25	34	30	26.3		
	Minimum.. 18	9	-1	-11	9	8	1	-11	-15	18	3	-12	-5	2	12	4	-8	-17	8	20	14	22	22	15	-10	-7	10	11	9	0	10	4.4		
Marmarth	Maximum.. 32	32	25	27	25	16	17	25	39	40	32	10	9	15	25	39	36	29	37	30	32	41	46	40	30	36	30	25	23	40	47	30.3		
	Minimum.. 28	23	16	20	10	-4	-3	-2	9	30	10	-13	0	1	8	-5	15	0	7	10	11	6	26	15	9	16	15	0	-9	15	32	9.9		
Minot Airport	Maximum.. 31	20	6	20	17	10	8	10	31	39	25	-1	9	12	18	31	22	14	33	26	34	37	39	28	17	20	17	18	19	26	37	21.1		
	Minimum.. 20	6	-10	-10	8	-5	-4	-6	-6	23	-8	-14	-3	2	8	12	-8	-15	13	20	20	22	0	-4	8	5	5	1	5	14	3.3			
Mott	Maximum.. 34	32	25	25	25	14	14	18	28	40	35	18	16	21	37	35	15	35	31	36	38	42	35	23	31	29	20	22	30	44	27.4			
	Minimum.. 27	24	14	14	10	-3	-4	-7	3	24	8	-15	0	5	9	-3	12	-19	-2	11	22	8	24	14	15	10	12	-4	-2	3	27	7.7		
Pembina Airport	Maximum.. 30	30	4	16	26	19	8	4	19	43	33	3	17	25	28	31	17	25	21	27	29	39	41	44	32	16	24	28	24	27	26	23.3		
	Minimum.. 21	3	-9	-15	6	6	0	-9	-22	19	-6	-12	2	4	10	8	-2	-11	12	19	12	23	27	10	4	-2	22	17	11	5	4	5.5		
Sharon	Maximum.. 29	30	17	26	30	30	12	11	23	43	35	11	16	19	22	28	25	17	37	29	37	38	49	39	23	31	31	25	21	29	29	27.7		
	Minimum.. 22	17	5	-6	14	10	3	-7	-16	18	8	-9	-2	6	12	0	2	-11	5	20	21	22	17	2	11	13	17	12	13	12	8	8.4		
Steele	Maximum.. 33	31	19	18	32	25	8	17	23	39	32	11	9	16	20	31	27	12	27	30	35	36	40	32	23	32	27	17	14	30	44	25.4		
	Minimum.. 27	19	9	-11	6	-1	-2	-13	-16	21	5	-11	-3	4	5	-4	9	-21	-5	8	23	17	20	14	-1	13	7	10	2	-1	18	4.4		
Valley City	Maximum.. 43	34	27	25	33	16	15	16	26	45	39	26	17	23	25	30	29	18	34	32	41	40	47	43	26	36	33	30	23	31	38	30.3		
	Minimum.. 27	25	12	0	19	12	6	-1	8	20	20	-1	5	12	13	9	15	-6	6	21	25	24	27	24	7	17	15	12	7	18	12.7			
Wahpeton	Maximum.. 34	37	35	30	35	33	16	15	22	45	47	21	22	26	27	31	30	22	33	38	42	41	50	49	29	36	35	29	24	33	32	32.3		
	Minimum.. 25	29	10	0	17	12	5	5	-14	18	20	0	7	16	14	15	11	-9	4	19	26	30	28	25	10	22	18	20	15	11	19	13.3		
Williston	Maximum.. 31	27	23	28	22	15	14	21	45	39	31	4	7	15	24	39	30	31	40	29	36	47	47	20	23	23	22	23	24	35	48	27.8		

Daily Precipitation for March 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James Red.	T.	.02	T.			.15	T.						.04	.24							T.						.15	T.	.05				0.65	
Casselton	James Red.	T.	T.			.25	.30	.09				T.		.05								T.						.10	T.	.20	.12	T.	.20	1.05	
Cooperstown	Sheyenne	T.	T.			.04	.30	.09				T.		.11								T.						.07	T.	.20	.12	T.	.20	1.05	
Courtenay	James	T.	T.		T.	T.	T.					T.		.06	.01	T.	T.					T.						.10	T.	.20	.12	T.	.20	1.05	
Devils Lake ¹⁵	Devils Lake	.04	T.	T.	T.	.20	.01	T.				T.		.06	.01	T.	T.			.01	T.	T.	T.	T.				.23	.05	.21	T.	.15		0.40	
Edgeley	James	T.	T.	T.	T.	.20	.01	T.				T.		.06	.01	T.	T.					T.						.23	.05	.21	T.	.15		0.40	
Edmore	Devils Lake	.01	.01			.22	.05		T.			T.		.10		T.						T.						.19	.21	.05	.05			0.76	
Ellendale	James	T.	T.	.05		T.	.02					T.		.23	.17	.07						T.						.04	.16	.08	.08			1.03	
Fargo ¹⁵	Devils Lake	.01	.01			.22	.05		T.			T.		.10		T.						T.						.19	.21	.05	.05			0.76	
Forman	Red.	T.	T.	T.	.30	.51	.07	T.				T.	.01	.20	.01	T.	T.					T.	T.	T.	T.			.04	.06	.03	.02			0.50	
Fullerton	Sheyenne	T.	T.	T.	.04	.02	T.					T.		.09	.03	.02	T.	T.				T.	T.	T.	T.			.04	.06	.03	.02			1.26	
Gackle	James		.02			.04	T.					T.		.46	.20	.03	T.	T.				T.						.06	.19	.15	.07			0.03	
Grafton	do					.15						T.		.15		.07						T.						.15	T.	.30	T.			0.02	
Grafton	Red.	T.	.06			.58	.13					T.		.05	.03							T.	T.	T.				.26	.01	.15	.36	.41		0.67	
Grand Forks Airport ³	do	.03	T.	T.		.33	.37	.14	T.			T.	.05	.10	.02		T.	T.				T.	T.	T.				.03	.05	.07	.05	.04		0.09	
Hankusson ²	do					.45	.14					T.		.10	.17							T.						.05	.03	.05	.07	.05		0.09	
Hannah	Pembina	T.	T.	T.	T.	.25	.24					T.		.11	.04		T.	T.				.01	T.	T.	T.				.32	.14	.30	.06		1.33	
Hillsboro	Red.	.03				.05	.53	.15				T.		.35	.01	T.	T.					.01	T.	T.	T.				.05	.03	.09	.06	.04	.10	1.29
Jamestown Airport ³	James	T.	T.	T.	T.	.02	.01	.01	T.			T.		.35	.01	T.	T.					T.		T.	T.				.03	.09	.06	.04		.10	1.29
Langdon	Pembina	.02	.03																																

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.
¹ Midnight to midnight.
² Measured in the morning; for the preceding 24 hours.

3 Data for 24 hours ending 12:30 a.m.C.S.T. of the following day.
5 Recording gage.
T. Trace, or 0.005 inch or less

[WBO, Minneapolis, 5-25-44--1050]

51.05
NNT
534

Next Next Lab

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIII BISMARCK, N. D., APRIL 1944 No. 4

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The month was cool and dry. Little precipitation occurred during the first 13 days. From the 14th to the 30th light to moderate amounts were reported. The least amounts occurred in the northeastern counties and it was the fourth driest April since records began in the eastern division. Sunshine was about normal. Planting, while delayed by the late season, was well under way by the close of the month with above average spring wheat acreage being planted. Ranges were greening slowly at the close of the month, but they afforded little feed. On April 1st the smaller streams in western North Dakota began breaking up and local flooding occurred, but damage was slight. The greatest damage occurred on the Cannonball River due to the heavy snowfall and resultant run-off from the southwestern part of the state, and on the Heart River due to ice jams in the Mandan area. No serious flooding occurred on the Missouri River or the rivers in the eastern part of the state.

TEMPERATURE

The mean temperature for the state was 40.8°, or 0.8° below the 1892-1944 average for April. The mean temperature for the eastern division was 40.1°; for the middle division, 40.8°; and for the western division, 41.4°. The highest mean temperature was 43.9° at Watford City, and the lowest, 37.4° at Edmore, making a range in mean temperature of 6.5°. The absolute range was 88°, from 77° at New Hradec on the 29th, to -11° at Bottineau on the 1st. The average daily excess in temperature for the state since January 1, 1944, is 2.2°.

PRECIPITATION

The average precipitation for the state was 0.80 inch, or 0.64 inch less than the 1892-1944 average for April. In the eastern division the average amount was 0.74 inch; in the middle division, 0.83 inch; and in the western division, 0.84 inch. The greatest monthly amount reported was 1.95 inches at Milnor; the least was 0.06 inch at Pembina. The greatest amount recorded in any 24 consecutive hours was 1.40 inches at Van Hook on the 30th. The accumulated deficiency in precipitation for the state since January 1, 1944, is 0.80 inch. The average snowfall was 0.2 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)		Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Lowest	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.51	29.52	13	11.1	32	se.	28	79	86	53	62	689
Devils Lake	30.54	29.66	13	8.2	27	ne.	14	74	79	49	58	742
Fargo	30.52	29.59	30	11.3	32	ne.	23	78	84	53	60	720
Williston	30.51	29.49	13	7.4	24	se.	12	66	75	48	63	644

† And other dates.

SILENT OBSERVERS

The Weather Bureau reports with sincere regret the death on March 12, 1944, of Mr. W. B. Paterson, Cooperative Observer at Rugby since 1934. Mr. Paterson's reports were prompt, well rendered, and most useful to the Weather Bureau.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lunar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thunderstms. .	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.6	75	-2	2.58	3.09	2.29	2.65	6.3	7	10	6	14
1893...	34.3	77	-8	2.45	1.56	1.09	1.70	7.8	6	7	9	14
1894...	42.8	92	12	3.66	2.93	2.50	3.03	4.4	9	8	10	12
1895...	49.6	87	10	2.10	2.38	2.20	2.23	0.0	5	13	8	8
1896...	40.1	92	2	5.50	3.73	2.18	3.80	5.1	9	9	8	13
1897...	40.8	93	7	0.80	1.20	1.24	1.08	1.1	5	12	8	10
1898...	41.9	87	-4	1.38	1.36	1.40	1.38	0.5	5	14	9	7
1899...	38.0	86	-22	1.46	1.31	1.31	1.36	6.3	6	12	10	8
1900...	49.3	93	11	0.75	0.75	1.05	0.85	T.	3	20	6	4
1901...	44.5	92	10	1.40	0.72	0.82	0.98	0.3	4	12	9	9
1902...	40.2	87	-2	1.35	0.88	0.95	1.06	2.9	3	12	8	10
1903...	42.5	83	8	1.67	1.10	0.92	1.23	2.7	5	16	6	8
1904...	37.4	91	2	2.22	1.21	0.72	1.38	8.1	5	13	5	12
1905...	40.2	83	3	1.04	0.38	0.11	0.51	3.7	3	15	8	7
1906...	46.7	88	8	1.96	1.06	1.48	1.50	1.3	3	14	7	9
1907...	31.9	80	-6	0.77	0.36	0.44	0.52	4.2	4	10	9	11
1908...	43.9	91	-19	1.12	1.53	1.91	1.52	5.9	5	16	6	8
1909...	34.2	80	3	0.95	0.71	0.64	0.77	5.1	6	10	9	11
1910...	48.0	96	4	1.52	1.03	1.56	1.37	2.9	4	16	8	6
1911...	41.5	90	-5	2.12	0.80	0.64	1.19	6.3	5	15	6	9
1912...	44.4	88	2	2.61	2.32	2.22	2.35	1.7	7	14	8	8
1913...	46.8	94	11	1.00	0.70	0.23	0.64	2.4	4	16	6	8
1914...	40.8	84	2	2.49	1.31	0.58	1.46	2.8	6	9	10	11
1915...	50.3	99	-5	1.42	0.98	0.68	1.03	1.8	5	15	8	7
1916...	39.2	79	-6	1.70	1.07	1.54	1.44	2.9	5	10	10	10
1917...	37.2	73	5	1.89	1.67	1.49	1.68	5.6	7	9	9	12
1918...	41.4	81	0	2.38	1.87	2.28	2.18	3.0	7	12	8	10
1919...	42.3	79	6	1.45	1.40	1.72	1.52	6.2	6	11	9	10
1920...	32.1	63	-11	0.73	0.67	1.12	0.84	2.1	5	13	8	9
1921...	41.1	91	-1	1.84	2.07	1.40	1.77	3.8	7	14	7	9
1922...	42.3	89	-2	1.17	0.79	0.79	0.92	2.3	6	10	9	11
1923...	38.7	89	-15	1.22	1.63	1.51	1.45	7.2	5	13	8	9
1924...	39.3	84	-6	3.94	2.31	1.35	2.53	7.5	9	8	9	13
1925...	47.8	85	10	2.21	1.37	1.22	1.60	T.	6	11	10	9
1926...	42.8	98	-4	0.17	0.34	0.32	0.28	0.9	3	17	8	5
1927...	41.4	95	7	2.05	1.46	1.67	1.73	2.3	7	10	8	12
1928...	35.9	84	-6	0.92	0.88	0.92	0.91	5.0	5	12	10	8
1929...	41.5	85	-9	1.68	1.36	0.88	1.31	3.4	6	12	9	9
1930...	47.3	86	8	1.16	1.14	1.45	1.25	0.5	6	14	7	9
1931...	44.1	87	3	0.75	0.37	0.18	0.43	0.7	2	18	8	4
1932...	44.1	79	0	2.50	2.09	1.84	2.14	0.7	8	9	9	12
1933...	40.0	84	2	1.44	1.20	1.35	1.33	7.3	5	11	9	10
1934...	43.7	95	7	0.75	0.34	0.24	0.44	1.9	3	15	8	7
1935...	38.4	83	0	2.62	1.75	1.42	1.93	3.6	8	9	9	12
1936...	35.6	87	-15	0.53	0.26	0.37	0.39	0.5	4	14	10	6
1937...	40.7	79	2	3.44	1.56	1.06	2.02	5.8	8	8	9	13
1938...	42.8	90	1	1.68	0.96	0.64	1.09	0.1	5	11	10	9
1939...	41.6	90	-1	0.93	0.66	1.03	0.87	0.8	6	12	9	9
1940...	37.8	78	-9	1.84	2.36	2.45	2.22	4.1	8	7	10	13
1941...	44.1	82	6	3.05	2.13	1.71	2.30	1.6	13	6	9	15
1942...	44.9	90	-6	2.12	1.75	2.01	1.96	3.3	7	11	9	10
1943...	44.9	83	11	1.46	1.56	1.42	1.48	0.1	5	15	10	5
1944...	40.8	77	-11	0.74	0.83	0.84	0.80	0.2	4	14	7	9
Period	41.6	99	-22	1.75	1.34	1.23	1.44	3.1	6	12	8	10

Climatological Data for April 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	38.4	-1.2	65	27†	4	1	0.34	-0.99	0.18	29-30	0	5	14	9	7	.....	Soo Line Agent.
Casselton	Cass	934	48	41.6	0.0	64	29	9	1†	0.72	-1.03	0.34	23	T.	4	18	5	7	s.	C. Hayford.
Cavalier	Pembina	894	34	41.2	.....	72	27	5	1†	0.12	-1.27	0.06	29	0	3	17	6	7	n.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	72	27	5	1†	0.55	-1.11	0.35	24	0	2	22	4	4	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	47	40.4	+0.1	68	27	-3	1	0.29	-1.10	0.15	30	T.	2	16	3	11	ne.	R. J. Lockner
Courtenay	Stutsman	1,523	14	.....	.....	68	27	-3	1	0.55	-0.88	0.25	24	0	4	10	14	6	ne.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	40.3	+1.5	69	27	-2	1	0.72	-0.80	0.47	30	T.	5	12	4	14	ne.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	40.2	-2.4	63	27†	12	1	1.64	-0.11	0.68	30	T.	6	11	9	10	ne.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,521	20	37.4	-1.9	68	27	-8	1†	0.31	-0.95	0.16	30	T.	3	20	1	9	e.	Mike Davis.
Ellendale	Dickey	1,457	49	40.2	-2.5	65	30	14	1	1.69	-0.17	0.55	29-30	0	9	16	1	13	ne.	J. E. Demmer.
Fargo Airport, 24 mi. NNW	Cass	895	17	41.0	+0.4	67	27	5	1	1.17	-1.01	0.54	23-24	T.	8	10	7	13	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	40.8	-3.2	65	27	12	1	1.78	-0.25	0.62	30	0	7	16	5	9	n.	Helge Dyste.
Fullerton	Dickey	1,439	46	41.0	-1.7	65	27†	13	1	1.42	-0.72	0.54	14	T.	7	13	4	13	ne.	F. O. Alin.
Gackle	Logan	1,951	14	40.8	.....	62	22†	10	1	0.86	-0.68	0.53	29-30	0	4	9	7	14	e.	Jack Dixon.
Grafton	Walsh	827	52	42.1	+1.5	72	27	4	2	0.09	-1.25	0.09	23-24	0	1	18	7	5	se.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	41.4	+0.1	69	27	3	1†	0.78	-0.88	0.46	24	T.	4	16	6	8	se.	University of N. Dak.
Grand Forks Apt. 24 mi. W	Grand Forks	832	4	40.4	.....	71	27	2	1	0.62	.....	0.35	23-24	T.	4	12	4	14	ne.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	39.5	-4.0	67	27	12	1	1.77	-0.24	0.70	24	0	7	18	4	8	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	39.2	+1.3	68	27	-4	1	0.25	-0.87	0.10	29†	0	3	10	12	8	se.	A. E. Prior.
Hillsboro	Trall	901	44	41.0	-1.2	70	27	7	1	0.83	-1.05	0.45	24	T.	4	13	7	10	ne.	Alfred Jahinke.
Jamestown, 2 miles SE	Stutsman	1,457	52	41.0	-0.7	65	27	10	1	0.55	-1.15	0.23	14	T.	4	10	12	8	ne.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE	Stutsman	1,491	4	39.9	.....	64	27†	9	1	0.44	.....	0.22	14	T.	4	11	5	14	ne.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	38.3	.....	64	27	5	1	0.54	.....	0.27	24	T.	5	14	5	11	ne.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	40.5	+2.9	68	27†	-6	1	0.16	-1.07	0.11	30	0	3	14	10	6	ne.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	40.4	+0.2	69	27	2	2	0.26	-1.34	0.18	24	T.	2	19	4	7	se.	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	40.2	-1.9	66	27	11	1	1.22	-0.71	0.34	15	0	8	17	3	10	nw.	J. O. Halverson.
Mayville	Trall	975	48	41.6	-0.9	69	27	6	1†	0.63	-0.92	0.38	24	0	2	16	3	11	e.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	38.6	-2.0	67	27	-5	1	0.48	-0.89	0.23	23-24	T.	4	13	7	10	ne.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	33	39.6	-4.0	69	29	9	1	0.66	-1.33	0.40	23-24	T.	3	16	5	9	ne.	J. G. Carlson.
McVile	Nelson	1,467	14	.....	.....	62	29†	11	1	1.95	+0.01	0.72	23-24	0	6	19	8	3	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	38.3	.....	62	29†	11	1	0.96	+0.01	0.72	23-24	0	6	19	8	3	nw.	E. W. Wilson.
Oakes	Dickey	1,318	15	38.9	-3.9	62	29†	13	1†	0.96	-0.91	0.32	14	T.	7	14	5	11	nw.	F. H. Murray.
Park River	Walsh	998	40	38.7	-1.8	69	27	2	1†	0.32	-1.00	0.32	29-30	0	1	21	3	6	se.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	40.8	+2.3	74	27	5	2	0.06	-1.20	0.05	29-30	0	2	15	7	8	n.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	38.8	.....	68	27	-5	1	0.40	-0.95	0.30	30	T.	3	16	9	5	ne.	T. M. Rykken.
Sharon	Steele	1,516	20	39.9	+0.3	68	27	-3	1	0.60	-0.88	0.40	30	0.2	4	13	8	9	ne.	Nels O. Grelshim.
Valley City	Barnes	1,229	38	41.2	-1.2	67	27	8	1	0.38	-1.18	0.15	24	0	5	17	5	8	ne.	I. C. Robertson.
Wahpeton	Richland	962	52	41.6	-2.6	65	27†	8	1	1.91	-0.17	0.72	23	T.	9	13	4	13	se.	W. J. Cavanaugh.
Average for Eastern Division				40.1	-1.1	74	27	-8	1†	0.74	-1.01	0.72	23-24	T.	4	15	6	9	ne.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	38.8	-3.6	62	30	12	1	0.70	-0.91	0.28	29-30	1.2	8	8	6	16	e.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	40.2	-0.5	66	27	0	1†	0.51	-0.68	0.36	30	0	2	15	7	8	se.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	43.0	-0.1	67	30	19	1	1.15	-0.04	0.86	13-14	0.1	4	8	9	13	se.	U. S. Weather Bureau.
Bismarck Airt., 24 mi. SE	Burleigh	1,050	5	42.1	+1.7	64	30	19	1	1.05	-0.47	0.75	13-14	0.1	6	8	9	13	se.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	41.6	+2.6	70	27	-11	1	0.61	-0.23	0.25	29-30	2.1	4	21	2	7	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	40.6	-0.7	67	29	4	1	0.55	-0.75	0.30	29-30	1.5	3	13	6	11	se.	R. L. Williams.
Carson, 24 miles SW	Grant	2,500	32	42.0	-0.5	66	20†	19	3†	1.56	+0.21	0.52	14	T.	4	14	5	11	se.	J. W. Evans.
Center	Oliver	2,100	6	40.6	.....	67	29	15	1	1.39	-0.98	0.34	13-14	T.	3	17	5	10	se.	Fred L. Heinz.
Drake	McHenry	1,634	15	39.8	-0.6	65	27	8	1	0.56	-0.61	0.29	29-30	T.	6	17	3	10	e.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	48	39.2	-0.3	65	27	-8	1	0.95	+0.11	0.75	30	0.5	4	21	3	6	se.	Hubert Downs.
Eckman	Bottineau	1,500	39	39.8	-0.6	66	27	-8	1	0.61	-0.30	0.42	29-30	T.	4	10	13	7	se.	E. R. Sherman.
Fessenden	Wells	1,610	32	40.8	+0.4	66	27	7	1	0.40	-0.92	0.23	29-30	T.	5	15	8	7	s.	John V. Zuber.
Fort Yates	Sioux	1,670	44	41.5	-3.3	65	29	18	3	1.24	-0.11	1.24	14	0	1	20	6	4	se.	P. J. Jacobson.
Foxholm, 64 miles NE	Ward	1,657	23	40.3	-0.5	67	29	-7	2	0.98	-0.27	0.59	29-30	1.0	4	9	11	10	se.	E. C. Bierbaum.
Garrison	McLean	1,911	67	41.4	-0.7	68	29	13	1	0.94	-0.22	0.64	14	T.	5	8	10	12	se.	Mae H. Vorachek.
Granville	McHenry	1,504	37	41.3	+0.5	69	29	2	1	0.60	-0.34	0.37	30	0	3	20	2	8	s.	Fred Roble.
Hansboro	Towner	1,597	36	38.8	+0.2	68	27	-2	1	0.46	-0.79	0.35	30	0	3	17	7	6	ne.	W. E. Disher.
Harvey	Wells	1,596	41	.....	.....	68	27	-3	1	0.44	-0.80	0.28	29-30	0	5	10	6	14	s.	Orville Holsch.
Leeds	Benson	1,515	4	40.8	.....	68	27	-3	1	0.44	.....	0.24	30	0	4	9	13	8	ne.	John Dulmage.
Linton	Emmons	1,711	27	42.5	-0.3	70	30	16	1	1.01	-0.27	0.76	14	0	6	10	4	16	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	40.8	+0.2	68	26†	-1	1	0.27	-0.85	0.14	30	T.	4	10	12	8	se.	A. T. Felland.
Mandan, 14 miles SW	Morton	1,750	30	41.8	-0.8	64	30	18	1†	1.20	-0.08	0.50	15	T.	3	13	2	15	se.	No. Gt. Plains Field Sta.
Max	McLean	2,093	15	40.6	0.0	67	29	1												

Climatological Data for April 1944-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Western Division																					
Elbowoods	McLean	2,082	50	43.0	0.0	73	29	19	1†	1.52	+0.51	0.90	29-30	T.	2	14	10	6	ne.	H. W. Case.	
Epplugh	Williams	2,224	33	42.6	+0.9	67	20	18	2	0.55	-0.44	0.36	30	0	2	14	13	3	se.	T. Beachler.	
Fairfield, 94 miles N.	Billings	2,650	7	40.9	.....	72	29	18	1†	0.50	-0.72	0.43	29-30	0	2	15	9	6	se.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	40.9	.....	72	29	18	1†	0.51	-0.78	0.45	29-30	T.	3	8	14	8	se.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	40.6	-1.6	66	29	18	3†	0.57	-0.61	0.38	29-30	0.7	5	3	8	19	e.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	35	42.7	+3.4	68	20	16	1	0.75	-0.28	0.60	29-30	0	2	15	6	9	se.	John S. Sorensen.	
Haliday	Dunn	2,073	3	40.7	.....	72	29	18	1	0.94	.....	0.54	14	0	3	14	6	10	e.	John Kisse.
Hettinger	Adams	2,675	36	40.7	-2.2	64	12	15	3	0.99	-0.07	0.48	29-30	T.	3	19	4	7	e.	A. W. Anderson.	
Kenmare	Ward	1,799	12	40.5	+0.3	64	20	5	1	1.16	+0.24	0.46	13-14	0.9	6	18	4	8	se.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	34	42.8	-0.4	69	29	20	2†	1.05	-0.02	0.41	29-30	0	5	15	8	7	se.	S. P. Grane.	
Medora	Billings	2,271	28	43.8	.....	72	29	18	16	0.58	-0.57	0.43	29-30	0	2	18	7	5	se.	Harry Roberts.
Mott	Hettinger	2,424	36	41.7	-0.6	66	29	18	3	0.62	-0.60	0.27	29-30	T.	5	17	8	5	se.	P. G. Wick.	
New England	Hettinger	2,621	49	39.8	-2.6	70	29	12	3	0.64	-0.56	0.33	28-29	0	6	15	11	4	se.	F. S. Sleight.	
New Hradec, 1 mile E.	Dunn	.....	3	42.8	.....	77	29	18	17	0.51	.....	0.34	14-15	T.	3	19	3	8	se.	Peter F. Pieck.
Parshall	Mountrail	1,929	28	41.4	+2.4	71	29	12	1	0.86	-0.21	0.45	30	T.	3	10	17	3	se.	C. E. Shubert.	
Portal	Burke	1,954	38	40.6	0.0	65	20	8	2	0.96	+0.02	0.26	29†	1.0	7	13	8	9	se.	U. S. Customs Service.	
Powers Lake	Burke	2,205	38	40.4	+0.4	60	28	12	1	0.58	-0.56	0.51	30	0	2	15	7	8	e.	Geo. B. Gee.	
Richardton, 1 1/2 miles N.	Stark	2,467	27	40.6	-0.8	67	29	19	1	0.89	-0.33	0.32	14	1.1	5	8	13	9	se.	Assumption Abbey.	
Ryder	Ward	2,108	15	40.8	.....	74	29	17	1†	1.08	-0.03	0.55	29-30	0.5	3	13	2	15	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	40.8	-0.9	74	29	17	1†	1.05	-0.07	0.50	29-30	0.2	5	7	14	9	.....	H. J. Bugge.
Stanley	Mountrail	2,258	6	39.4	.....	64	29	13	1	1.43	.....	0.84	29-30	1.0	5	14	6	10	s.	Leroy Edwards.
Tagus	Mountrail	2,179	15	40.8	.....	74	29	17	1†	1.00	-0.15	0.63	30	T.	2	10	19	1	se.	Mrs. G. E. Vogt.
Tloga	Williams	2,279	15	40.8	.....	74	29	17	1†	1.00	-0.15	0.63	30	T.	2	10	19	1	se.	H. Francis Cannon.
Trotters	Golden Valley	.....	18	40.8	.....	74	29	17	1†	0.54	-0.51	0.43	30	0	3	1	25	4	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	42.2	.....	72	29	10	1	1.90	-0.49	0.40	30	T.	3	14	5	11	se.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	43.9	+2.5	73	12†	20	1†	0.68	-0.49	0.36	30	0	2	11	13	6	se.	J. C. Zeller.	
Wildrose	Williams	2,258	16	43.5	+1.5	67	20	22	17	0.72	-0.24	0.40	30	0	5	14	10	6	se.	Jonathan Winkjer.	
Williston	Williams	1,878	64	43.5	+1.5	67	20	22	17	0.42	-0.78	0.30	29-30	T.	4	4	11	15	se.	U. S. Weather Bureau.	
Average for Western Division				41.4	0.0	77	29	5	1	0.84	-0.39	1.40	30	0.4	4	13	9	8	se.		
Average for the State				40.8	-0.7	77	29	-11	1	0.80	-0.64	1.40	30	0.2	4	14	7	9	se.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for April 1944

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	31	35	35	39	49	53	54	39	52	52	53	58	57	40	43	48	54	55	53	53	51	59	54	40	52	50	58	56	60	62	49.8	
	Minimum	12	17	18	17	21	27	25	28	28	22	26	24	33	32	23	20	22	24	32	24	34	38	34	33	34	32	28	37	46	45	27.7	
Blismarek Airport	Maximum	35	40	42	43	53	59	53	41	50	55	55	61	60	44	47	53	55	58	59	58	59	60	58	48	53	52	57	60	63	64	53.3	
	Minimum	19	23	22	22	26	29	25	33	27	25	28	27	42	32	26	22	24	27	30	28	34	40	36	37	33	41	34	41	49	48	31.1	
Bottineau	Maximum	32	39	37	42	54	49	51	42	55	59	62	66	64	60	55	54	62	66	63	65	66	68	62	55	60	65	70	63	67	69	57.7	
	Minimum	-11	0	10	19	20	25	20	29	15	21	29	31	31	25	25	29	28	28	29	33	28	34	37	35	31	33	30	33	42	39	27.2	
Carson	Maximum	34	36	39	42	52	61	51	42	51	55	58	62	62	53	47	48	54	58	62	66	63	64	60	54	56	48	59	60	63	66	53.3	
	Minimum	21	26	19	22	25	30	25	32	29	28	26	30	40	32	19	19	24	25	30	33	35	39	30	32	29	37	30	39	48	46	30.0	
Crosby	Maximum	31	37	42	45	54	50	37	36	49	53	57	58	49	48	44	51	55	57	63	68	60	60	63	53	57	56	62	58	56	52	52.2	
	Minimum	21	15	17	18	21	26	27	31	21	28	29	34	34	31	24	25	22	27	28	32	29	29	29	31	31	35	37	39	41	47	28.8	
Devils Lake	Maximum	27	33	33	28	50	48	48	33	48	55	56	61	58	52	45	53	60	61	60	57	62	62	58	48	52	64	69	62	65	51	52.2	
	Minimum	-2	4	12	14	19	25	23	27	22	24	28	31	35	32	22	19	26	31	31	35	40	30	39	38	38	32	39	49	48	28.8		
Dickinson Airport	Maximum	31	36	35	38	45	56	47	47	45	51	53	61	59	41	43	46	51	55	63	62	51	56	58	53	52	50	61	57	68	60	51.0	
	Minimum	23	25	22	21	26	29	31	31	29	29	33	31	36	31	25	23	25	27	28	32	33	35	30	27	24	34	31	39	46	46	30.3	
Dunn Center	Maximum	34	37	44	46	53	55	47	41	50	55	58	63	60	40	46	50	56	59	64	63	56	58	60	53	55	54	62	57	75	65	53.9	
	Minimum	19	20	18	19	23	25	23	29	28	27	30	27	28	33	26	18	20	20	22	26	28	30	32	27	29	31	28	33	42	46	26.6	
Fargo Airport	Maximum	28	35	32	37	50	59	52	44	51	54	55	60	61	46	45	53	60	61	60	59	62	52	45	43	48	63	67	65	63	57	52.2	
	Minimum	5	10	20	16	20	33	27	31	27	27	26	25	35	32	25	22	27	28	39	29	40	40	38	39	40	30	43	50	50	29.9		
Fessenden	Maximum	27	34	40	45	54	59	54	49	50	57	53	63	57	55	48	55	62	62	57	54	61	58	59	52	52	60	66	61	60	58	54.1	
	Minimum	7	13	11	20	23	25	22	29	20	22	28	27	34	34	20	17	22	28	29	24	35	36	29	37	37	38	29	37	48	47	27.7	
Fullerton	Maximum	33	37	37	40	51	57	55	50	62	52	56	60	63	48	45	51	57	60	57	51	57	59	49	46	52	51	65	60	63	65	52.2	
	Minimum	13	18	21	20	21	27	26	27	28	25	27	27	34	33	25	21	23	27	30	28	31	39	38	36	39	28	34	49	49	29.9		
Garrison	Maximum	32	35	42	46	54	53	47	36	49	55	57	60	55	45	47	51	56	59	61	62	58	60	60	53	55	53	60	59	68	65	53.3	
	Minimum	13	18	19	22	24	30	20	31	23	26	31	27	37	33	25	22	25	28	30	32	41	34	32	35	39	36	40	47	47	29.7		
Golva	Maximum	34	37	39	42	48	58	58	52	43	52	56	61	52	50	48	48	51	57	61	64	51	56	57	59	56	56	63	63	66	57	53.2	
	Minimum	25	22	18	23	25	27	32	32	28	27	31	29	29	27	28	21	18	21	23	32	26	32	27	22	20	31	29	40	45	45	27.8	
Grafton	Maximum	29	36	35	34	45	46	43	49	49	54	60	61	63	59	52	56	60	65	64	61	66	64	61	60	58	68	72	71	68	66	55.5	
	Minimum	5	4	13	11	7	21	24	29	25	27	27	32	32	32	25	26	27	37	38	35	40	35	34	40	40	40	31	31	36	51	28.8	
Grand Forks Airport	Maximum	26	33	29	32	48	50	44	37	48	52	54	61	62	53	45	54	59	63	63	60	65	54	59	45	54	65	71	67	66	57	52.5	
	Minimum	2	3	17	9	16	28	25	28	25	25	26	28	33	30	24	22	23	26	29	38	35	37	39	38	37	35	34	39	51	47	28.2	
Jamestown Airport	Maximum	33	37	37	41	51	56	51	37	52	55	56	60	59	43	46	54	58	59	57	52	60	63	58	42	55	54	64	62	64	58	52.6	
	Minimum	9	15	19	19	18	25	21	30	22	22	24	21	34	31	22	16	20	24	25	30	32	37	35	36	35	28	33	49	47	27.7		
Kenmare	Maximum	33	38	39	43	51	45	39	35	46	52	55	60	53	52	48	51	57	58	62	64	61	63	63	56	56	60	61	58	63	57	52.2	
	Minimum	5	9	10	16	22	25	24	29	17	24	36	30	36	39	23	19	21	27	33	34	30	38	28	34	38	39	36	38	45	47	28.4	
Langdon	Maximum	32	37	33	34	44	45	47	40	51	57	58	60	60	56	45	57	62	62	63	59	63	66	65	57	58	66	68	68	64	60	54.6	
	Minimum	-6	2	10	10	15	28	19	26	19	26	26	29	34	31	23	19	25	30	29	33	39	39	28	38	37	29	36	43	39	41	26.4	
Marmarth	Maximum	42	39	42	42	46	58	58	56	48	52	57	66	64	48	50	47	51	56	62	65	58	53	60	56	57	65	63	63	69	58	54.4	
	Minimum	30	20	20	24	26	30	37	36	32	27	35	30	42	28	30	20	21	26	31	32	35	37	30	26	25	32	28	35	45	47	30.6	
Milot Airport	Maximum	28	33	40	43	52	45	43	34	45	54	54	60	56	50	46	50	57	59	60	60	60	60	53	54	59	64	60	68	58	52	52.0	
	Minimum	6	11	17	20	24	27	25	26	21	27	32	30	39	32	25	28	28	29	35	34	32	40	33	24	38	39	33	38	49	46	29.9	
Mott	Maximum	38	27	39	43	50	57	52	46	48	55	55	63	65	49	44	47	52	58	63	62	51	57	57	54	52	51	61	60	66	61	53.1	
	Minimum	24	28	18	22	26	30	31	30	29	27	29	30	42	32	26	21	20	22	32	34	29	38	36	27	24	38	30	39	47	47	30.3	
Pembina Airport	Maximum	25	31	28	28	42	40	39	40	47	53	56	63	61	50	46	54	62	65	64	62	65	63	59	56	62	66	74	68	67	55	53.0	
	Minimum	6	5	11	6	7	25	22	27	25	28	30	34	34	31	25	24	28	30	29	34	42	36	32	43	41	32	34	40	51	49	28.7	
Sharon	Maximum	27	33	33	34	48	48	46	38	47	54	55	60	61	50	45	53	60	61	61	53	63	59	56	48	50	63	68	63	65	53	51.1	
	Minimum	-3	1	14	14	12	29	24	29	24	26	31	30	33	33	22	25	27	25	27	37	33	35	36	37	40	30	37	49	47	28.8		
Steele	Maximum	35	37	38	42	50	57	54	51	50	55	55	59	59	51	44	50	56	57	55	52	60	61	57	49	52	52	62	59	65	63	52.9	
	Minimum	14	15	18	16	18	24	20	31	21	20	19	23	34	31	21	18	21	24	27	23	30	37	32	34	34	37	28	37	47	45	26.6	
Valley City	Maximum	37	37	35	38	50	56	51	38	50	54	55	61	59	42	45	53	58	61	59	54	62	63	54	52	51	59	67	65	69	62	52.2	
	Minimum	8	10	18	17	17	17	25	32	27	26	31	23	33	33	26	21	22	28	28	41	33	42	41	37	38	40	29	39	52	48	29.9	
Wahpeton	Maximum	33	37	36	38	52	60	59	53	53	55	54	61	61	54	48	53	58	60	60	56	56	54	46	42	48	56	65	65	63	61	53.3	
	Minimum	8	12	20	17	20	31	27	30	25	25	28	25	34	34	25	21	24	27	33	36	33	40	40	37	36	36	39	31	40	48	49	30.0
Williston	Maximum																																

Daily Precipitation for April 1944

[illegible]

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.⁵ Recording gage.

T. Trace, or 0.005 inch or less

[WBO, Minneapolis, 6-16-44-1050]

551.05
UNNT
V.53
No.5

Nat'l Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

1944

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28
VOL. LIII BISMARCK, N. D., MAY 1944 No. 5

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

May was warm and there was ample precipitation except for small areas in the northern border counties where moisture was inadequate. The precipitation was well distributed throughout the month over the east portion and in some sections soil was too wet with the result that much planting was to be accomplished at the close of the month. Over the rest of the state, except for locally heavy showers which did minor crop and property damage, the rainfall averaged moderate. The freezing temperatures on the 4th and 5th did very little damage to crops because they were not far enough along to be damaged. Warm weather and general rains the last of May improved pastures and ranges. All crops were getting a very good start by the close of the month. On May 23d a deep southwest Low moving slowly northeastward was centered over South Dakota with a cold front moving slowly across North Dakota. This was attended by tornadoes near Ashley and Wishek, in McIntosh County. There were five distinct funnels observed between 5 p.m. and 8 p.m. Only one farm was in the path of the tornadoes. It was destroyed and a number of horses were killed, but no lives were lost. The property damage was estimated at about \$6,000.

TEMPERATURE

The mean temperature for the state was 58.2°, or 4.6° above the 1892-1944 average for May. The mean temperature for the eastern division was 58.3°; for the middle division, 58.5°; and for the western division, 57.9°. The highest mean temperature was 62.1° at Linton, and the lowest, 55.7° at Golve, making a range in mean temperature of 6.4°. The absolute range was 84°, from 95° at Underwood and Westhope on the 29th, to 11° at Granville on the 5th. The average daily excess in temperature for the state since January 1, 1944, is 2.7°.

PRECIPITATION

The average precipitation for the state was 2.73 inches, or 0.40 inch more than the 1892-1944 average for May. In the eastern division the average amount was 3.33 inches; in the middle division, 2.64 inches; and in the western division, 2.22 inches. The greatest monthly amount reported was 7.61 inches at Milnor; the least was 0.44 inch at Eckman. The greatest amount recorded in any 24 consecutive hours was 4.43 inches at Upham on the 11th. The accumulated deficiency in precipitation for the state since January 1, 1944, is 0.50 inch. The average snowfall was 0.1 inch.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	16	2	6	...	1	...	1	...	4	26	23	4	...	2	16	3	6	21	18	11	3	2	2	1	...	6	...	2			
Lunar halos ..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Solar halos ..	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hail .....	...	...	...	...	...	...	2	...	1	...	...	3	1	2	1	...	...	...	...	2	5	2	2	4	...	1	...	...	...	...	3
Thundrstm.	1	...	...	...	...	2	5	2	4	12	14	6	12	7	25	...	6	11	7	2	14	17	10	25	7	...	4	6	10	38	

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.29	27	29.49	22	12.5	45	e.	17	76	86	53	48	66	200
Devils Lake...	30.35	5	29.57	1	9.0	34	nw.	3	78	86	53	55	49	267
Fargo	30.29	27	29.57	1	11.2	44	nw.	3	83	85	64	62	52	261
Williston.....	30.45	4	29.50	22	8.1	28	e.	18	68	78	45	42	68	229

† And other dates.

COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	46.6	96	13	3.43	1.84	1.33	2.20	3.9	12	6	8	17	
1893...	52.2	97	19	1.29	1.14	1.14	1.61	0.2	6	11	8	12	
1894...	54.6	98	23	1.40	1.24	1.88	1.51	0.0	5	16	9	6	
1895...	54.4	101	15	2.60	2.88	2.57	2.48	0.0	8	10	11	10	
1896...	56.9	103	22	5.44	3.70	5.81	4.95	0.0	13	6	14	11	
1897...	55.4	97	16	0.85	0.61	0.60	0.67	T.	4	16	10	5	
1898...	52.7	92	14	1.95	1.84	2.15	1.98	0.0	5	15	9	7	
1899...	50.6	91	16	3.40	4.80	2.27	3.49	0.4	8	9	9	13	
1900...	59.2	106	15	0.78	0.70	0.59	0.69	0.0	3	18	8	5	
1901...	60.0	99	19	0.35	0.24	0.33	0.31	T.	2	21	4	6	
1902...	55.9	94	24	4.31	3.33	3.06	3.57	0.4	10	13	6	12	
1903...	54.3	96	11	2.52	3.35	3.50	3.12	T.	4	14	8	9	
1904...	54.2	93	20	2.05	1.64	1.10	1.60	T.	6	14	9	8	
1905...	50.1	88	10	4.24	2.78	1.72	2.91	4.0	8	12	8	11	
1906...	50.8	99	11	4.41	4.74	5.59	4.91	0.4	12	9	8	14	
1907...	44.0	84	6	1.52	1.02	1.39	1.31	3.1	6	12	10	9	
1908...	50.8	88	9	3.54	2.58	2.57	2.90	0.9	8	13	7	11	
1909...	51.0	98	5	4.78	3.92	4.68	4.46	0.1	10	12	9	10	
1910...	50.7	94	10	0.86	0.95	1.28	1.03	0.1	6	12	11	8	
1911...	55.0	99	6	4.06	2.25	2.39	2.90	T.	8	14	9	8	
1912...	54.2	90	16	4.17	4.59	4.42	4.39	0.7	11	10	10	11	
1913...	51.2	100	11	1.75	1.63	1.74	1.71	0.2	9	10	10	11	
1914...	55.2	95	16	1.83	2.56	1.98	2.12	1.0	8	16	8	7	
1915...	51.1	98	15	3.37	3.21	2.81	3.13	0.4	9	10	10	11	
1916...	51.0	95	7	2.95	1.70	1.64	2.10	0.3	8	11	11	9	
1917...	51.2	98	15	0.21	0.29	0.53	0.34	0.1	2	20	7	4	
1918...	51.7	99	6	2.58	2.40	1.83	2.27	0.5	9	10	11	10	
1919...	55.5	101	16	4.29	3.14	1.91	3.11	0.4	9	16	8	7	
1920...	53.9	89	20	2.40	1.34	1.54	1.76	0.1	7	13	10	8	
1921...	53.8	90	21	2.75	2.22	2.36	2.44	T.	9	13	10	8	
1922...	56.3	93	24	4.29	2.81	3.08	3.39	0.1	12	10	11	10	
1923...	54.1	100	13	2.56	1.57	1.17	1.77	0.2	6	15	10	6	
1924...	46.9	84	15	1.05	0.57	0.81	0.81	0.0	5	12	10	9	
1925...	53.6	111	10	1.94	1.17	1.22	1.44	T.	4	17	9	5	
1926...	58.5	105	10	2.07	2.09	2.45	2.20	0.0	7	13	11	7	
1927...	48.0	87	13	5.21	6.06	5.77	5.68	3.2	14	6	8	17	
1928...	58.2	107	16	1.02	1.23	1.00	1.08	0.0	5	18	7	6	
1929...	49.1	92	8	2.00	2.69	4.28	2.99	0.4	7	16	9	6	
1930...	50.8	98	18	3.76	2.40	1.69	2.62	0.7	9	12	8	11	
1931...	53.1	100	10	2.17	1.09	0.98	1.41	0.3	6	16	7	8	
1932...	55.9	98	25	2.66	2.02	1.76	2.15	2.2	6	13	9	9	
1933...	54.8	98	19	2.78	3.18	3.50	3.15	T.	9	9	10	12	
1934...	63.6	111	18	0.46	0.32	0.29	0.36	0.0	3	17	10	4	
1935...	49.5	89	20	2.11	2.93	2.79	2.61	1.5	12	6	11	14	
1936...	61.0	100	20	1.05	0.66	0.70	0.80	T.	4	19	9	3	
1937...	56.9	99	19	2.35	1.67	1.27	1.76	T.	7	12	11	8	
1938...	52.0	88	18	2.93	2.07	2.66	2.55	0.2	11	8	12	11	
1939...	60.1	104	18	1.33	1.60	1.71	1.55	0	8	13	11	7	
1940...	54.9	96	17	1.60	2.26	2.06	1.97	0.1	5	14	11	6	
1941...	58.3	98	21	2.23	3.12	3.48	2.94	T.	12	10	10	11	
1942...	50.0	87	19	3.87	2.94	2.27	3.03	0.5	11	9	9	13	
1943...	49.9	96	15	2.72	2.25	1.66	2.21	1.0	9	8	10	13	
1944...	58.2	95	11	3.33	2.64	2.22	2.73	0.1	11	11	12	8	
Period	53.6	111	5	2.55	2.23	2.20	2.33	0.5	8	13	9	9	

Climatological Data for May 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	58.0	+4.9	94	29	16	5	5.43	+2.94	1.94	24-25	T.	14	9	12	10	ne.	Soo Line Agent.
Casselton	Cass	934	48	58.6	+3.9	88	30	20	4	4.51	+1.71	1.13	11-12	T.	13	16	11	4	s.	C. Hayford.
Cavalier	Pembina	894	34	58.8		93	30	24	5	1.17	-1.09	0.34	21-22	0.4	9	7	18	6	s.	City Light & Power Co.
Colgate	Steele	1,180	11							4.45	+1.75	0.60	22	0	11	13	13	5	se.	O. M. Jensen.
Cooperstown	Griggs	1,428	47	58.6	+4.8	93	30	18	5	2.12	-0.41	0.70	18	T.	11	8	8	15	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	14							2.32	-0.11	0.81	18	0.5	14	16	8	7	e.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	58.0	+5.4	92	29	21	5	4.00	+1.97	2.01	24-25	0.1	13	8	10	13	e.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	59.3	+4.9	88	29	22	5	5.52	+2.96	2.01	18	0.1	16	6	19	6	s.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,524	20	55.8	+2.6	89	29	15	5	1.11	-0.75	0.27	11	0	9	18	9	4	e.	Mike Davis.
Ellendale	Dickey	1,457	49	59.8	+4.5	88	23	22	5	3.01	+0.40	0.57	25	0.9	14	12	10	9	se.	J. E. Demmer.
Fargo Airport, 24 mi. NNW	Cass	895	17	58.5	+3.4	86	29	24	4	4.70	+1.81	2.35	11-12	0.3	17	4	11	16	e.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	60.2	+4.5	85	23	24	5	3.91	+0.96	1.40	11	0	10	11	11	9	se.	Helge Dyste.
Fullerton	Dickey	1,439	46	60.4	+5.7	88	29	22	5	5.23	+2.24	2.01	30-31	0.4	15	10	15	6	s.	F. O. Alin.
Gackle	Logan	1,951	14	58.7		88	22	21	4	5.98	+3.40	3.00	23-24	0	9	5	12	14	e.	Jack Dixon.
Grafton	Walsh	827	52	59.4	+5.3	92	30	23	4	1.96	-0.06	0.49	25	T.	11	5	21	5	se.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	59.6	+5.4	90	29	25	4	3.35	+0.85	0.95	23	1.0	16	12	16	3	s.	University of N. Dak.
Grand Forks Aprt. 24 mi. W	Grand Forks	832	4	56.8		91	30	24	4	3.13		0.88	23	1.0	17	3	13	15	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	59.0	+1.0	88	30	24	4	3.16	+0.30	0.55	3	0	13	8	8	15	se.	Soo Line Agent.
Hannah	Cavalier	1,568	52	56.6	+5.0	87	29	18	5	4.05	+1.94	2.40	24-25	T.	8	9	8	14	se.	A. E. Prior.
Hillsboro	Traill	901	44	58.1	+3.3	88	30	24	4	2.63	-0.32	0.68	11-12	2.2	16	11	8	12	ne.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	52	59.6	+5.5	89	29	20	5	2.31	-0.46	0.50	18	0	12	9	8	14	ne.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE	Stutsman	1,494	4	58.3		87	23	19	5	3.00		0.78	15	0.2	15	4	15	12	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	57.4		88	29	15	5	2.31		0.55	18	0.1	13	11	12	8	ne.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	57.2	+5.4	90	30	14	5	1.95	-0.04	0.96	23-24	T.	9	10	16	5	s.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	58.4	+5.0	91	30	20	5	3.33	+0.60	1.10	21	0	12	15	2	14	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	58.8	+4.0	86	23	24	4	4.71	+1.94	1.49	12	0	15	15	2	14	se.	J. O. Halverson.
Mayville	Traill	975	48	58.4	+3.0	90	30	23	4	2.76	+0.04	0.80	25	0	11	8	12	11	s.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	56.6	+3.9	88	30	14	5	2.58	+0.27	0.78	23	0.3	14	10	12	9	sw.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	33	58.4	+2.6	87	29	22	4	4.73	+1.72	1.93	11-12	0	14	14	11	6	sw.	J. G. Carlson.
McVile	Nelson	1,467	14							1.79		0.21	1	T.	15	6	14	11	ne.	A. M. Casad.
Milnor	Sargent	1,117	5	56.3		84	28	22	4	7.61	+4.65	2.70	11-12	T.	12	13	11	7	se.	E. W. Wilson.
Oakes	Dickey	1,318	15	58.4	+2.8	86	23	23	5	4.58	+1.87	1.24	18	T.	13	16	3	12	nw.	F. H. Murray.
Park River	Walsh	998	40	56.3	+2.7	90	30	18	5	1.73	-0.21	0.41	25	0	10	15	12	4	se.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	57.7	+4.5	91	29	18	5	1.16	-1.03	0.36	23-24	T.	15	5	10	16	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	57.0		94	30	21	5	2.17	-0.27	0.35	30	T.	14	11	8	12	s.	T. M. Rykken.
Sharon	Steele	1,516	20	57.7	+3.6	90	30	21	5	2.17	-0.57	0.50	21	0.5	17	10	10	11	sw.	Nels O. Grefsheim.
Valley City	Barnes	1,229	38	59.8	+5.2	87	30	24	5	3.54	+0.88	0.85	18	1.5	15	12	12	7	sw.	I. C. Robertson.
Wahpeton	Richland	962	52	59.4	+3.1	86	30	24	4	2.47	-0.23	0.74	2-3	1.0	14	7	10	14	se.	W. J. Cavanaugh.
Average for Eastern Division				58.3	+4.0	94	29	14	5	3.33	+0.78	3.00	23-24	0.3	13	10	11	10	se.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	58.2	+4.0	86	23	18	5	1.83	-0.57	0.70	24-25	T.	14	4	10	17	se.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	58.0	+5.3	90	28	18	5	3.57	+1.42	1.70	24-25	0	9	14	4	13	se.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	60.6	+5.8	90	29	20	5	2.24	+0.01	1.72	24-25	T.	9	8	12	11	e.	U. S. Weather Bureau.
Bismarck Airport, 24 mi. SE	Burleigh	1,650	5	60.2	+7.2	90	30	19	5	2.45	+0.13	1.88	24-25	T.	11	8	12	11	e.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	59.2	+6.9	94	30	16	5	4.51	+2.41	1.74	24-25	T.	11	18	6	7	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,830	18	58.4	+3.6	88	13	12	5	1.62	-0.86	1.08	24	0	7	10	13	5	s.	R. L. Williams.
Carson, 24 miles SW	Grant	2,500	32	59.8	+5.3	92	29	14	5	2.55	+0.15	1.61	24	0	8	15	12	4	nw.	J. W. Evans.
Center	Oliver	2,100	6	57.8		92	29	12	5	2.51		1.24	24	0	11	9	19	3	nw.	Fred L. Hein.
Drake	McHenry	1,684	15	58.8	+4.1	92	29	17	5	1.45	-0.63	0.52	24	9	9	15	7	9	se.	H. G. Krigen.
Dunseith, 2 miles NNE	Rolette	1,682	48	57.3	+4.5	89	29	16	5	2.32	+0.45	0.93	24-25	T.	10	11	10	7	ne.	Hubert Downs.
Eckman	Bottineau	1,500	39	57.6	+5.0	94	29	16	5	0.44	-1.54	0.22	24-25	0	6	9	11	11	se.	E. R. Sherman.
Fessenden	Wells	1,610	32	58.8	+5.5	89	29	23	4	4.37	+2.09	1.60	11	0	10	9	17	5	s.	John V. Zuber.
Fort Yates	St. Louis	1,670	44	61.1	+4.4	90	13	16	5	2.15	-0.01				20	5	6	se.	P. J. Jacobson.	
Foxholm, 64 miles NE	Ward	1,657	23	58.4	+4.2	92	29	20	5	0.76	-1.27	0.34	24-25	T.	12	6	13	12	nw.	E. C. Bierbaum.
Garrison	McLean	1,911	67	58.3	+4.7	91	29	17	5	3.25	+0.92	1.30	31	0	10	6	15	10	w.	Mae H. Vorachek.
Granville	McHenry	1,504	37	57.8	+4.9	91	29	11	5	2.41	+0.38	0.77	25	0	12	16	10	5	nw.	Fred Roble.
Hansboro	Towner	1,597	36	56.0	+4.5	88	29	18	5	3.83	+1.73	0.83	24-25	T.	12	13	9	9	sw.	W. E. Disher.
Harvey	Wells	1,596	41							3.90	+1.72	2.41	24-25	0.1	13	12	8	11	se.	Orville Hokschi.
Leeds	Benson	1,515	4	58.5		92	29	18	5	3.66		1.15	24	0	11	7	16	8	ne.	John Dalmage.
Linton	Emmons	1,711	27	62.1	+6.4	90	29	18	5	1.79	-0.70	0.47	25	T.	14	7	12	12	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	58.6	+4.8	90	29	16	5	4.76	+2.71	2.40	24-25	0	12	7	13	11	se.	A. T. Felland.
Mandan, 14 miles SW	Morton	1,750	30	59.0	+3.9	89	29	17	5	3.13	+0.87	1.14	24	0	9	8	7	16	se.	No. Gt. Plains Field Sta.
Max	McLean	2,063	15	57.4	+3.3	91	29	20	5											

Climatological Data for May 1944-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days					Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Epping	Williams	2,224	33	58.4	+3.4	93	30	18	4	1.62	-0.52	0.65	12	0	8	17	12	2	nw.	T. Beachler.
Fairfield, 9 1/4 miles N	Billings	2,650	7							2.89	+0.53	0.82	9-10	0.6	7	21	6	4	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	25	57.4		89	30	21	5	2.67	+0.32	1.01	17	0.5	11	11	12	8	nw.	Verne King.
Golva, 1 mile E	Golden Valley	2,781	4	55.7	+2.7	87	29†	17	5	2.54	+0.28	0.39	17	T.	13	7	11	13	e.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35	58.4	+7.2	93	30	21	4	2.46	+0.24	1.38	11	T.	6	18	5	8	nw.	John S. Sorenson.
Halliday	Dunn	2,073	3							1.82		0.65	15	0	7	12	11	8	se.	John Kisse.
Hettinger	Adams	2,675	36	58.8	+4.3	89	29†	19	5	1.68	-0.60	1.23	16	0	3	19	9	3	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	58.6	+4.7	92	29	24	4	1.12	-0.86	0.31	19	0	10	14	4	13	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	59.4	+5.8	90	13†	20	5	1.96	-0.33	0.52	24	0.7	13	14	6	11	s.	S. P. Grane.
Medora	Billings	2,271	28	59.8		91	30	19	5	2.26	+0.08	0.63	17	T.	9	18	9	4	nw.	Harry Roberts.
Mott	Hettinger	2,424	36	59.0	+4.4	89	13†	17	5	2.00	-0.26	0.65	24-25	T.	10	15	9	7	nw.	P. G. Wick.
New England	Hettinger	2,621	49	56.9	+3.7	92	29	20	5	1.35	-0.82	0.46	17	0	7	12	13	6	nw.	F. S. Sleight.
New Hradec, 1 mile E	Dunn		3	57.4		86	13	15	5	1.73		0.83	17	0	9	17	9	5	w.	Peter P. Picek.
Parshall	Mountrail	1,929	28	57.4	+3.4	91	30	16	5	2.87	+0.70	0.75	31	0	14	6	22	3	se.	C. E. Shubert.
Portal	Burke	1,954	38	57.2	+5.1	92	30	19	4	1.60	-0.47	0.56	30	0	11	11	15	5	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	56.6	+3.1	94	30	21	4	1.48	-0.67	0.58	18-19	0	6	10	16	5	e.	Geo. B. Gee.
Richardton, 1 1/2 miles N	Stark	2,467	27	57.8	+3.9	87	29	21	4	4.76	+2.30	2.46	31	T.	8	10	13	8	uw.	Assumption Abbey.
Ryder	Ward	2,108	15							3.82	+1.73	1.13	22	0	10	12	7	12	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	57.2	+2.0	90	30	24	4	3.77	+1.82	1.05	31	0	13	7	20	4	.....	H. J. Bugge.
Stanley	Mountrail	2,258	6	56.1		92	30	19	5	3.01		1.02	31	0	12	10	14	7	e.	Leroy Edwards.
Tagus	Mountrail	2,179	15							1.68	-0.31	0.59	31	0	11	10	11	10	se.	Mrs. G. E. Vogt.
Toga	Williams	2,279	15																.....	H. Francis Cannon.
Trotters	Golden Valley		18							2.39	+0.16	1.20	31	T.	0	27	4	8	se.	Walter Grunewald.
Van Hook	Mountrail	1,884	4	57.8		92	30	20	5	2.75		0.77	31	0	9	8	14	9	e.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	58.4	+3.9	92	30	22	5	2.07	+0.08	0.73	17-18	T.	10	13	13	5	nw.	J. C. Zeller.
Wildrose	Williams	2,258	16							1.07	-0.83	0.22	23	0	9	16	13	2	e.	Jonathan Winkler.
Williston	Williams	1,878	64	59.2	+5.2	92	30	24	4	0.94	-1.12	0.40	18-19	T.	10	7	13	11	se.	U. S. Weather Bureau.
Average for Western Division				57.9	+4.2	94	30	14	5	2.22	+0.02	2.46	31	T.	9	13	11	7	nw.	
Average for the State				58.2	+4.6	95	29	11	5	2.73	+0.40	4.43	11	0.1	11	11	12	8	se.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for May 1944

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum	67	52	45	46	50	65	57	62	67	74	65	73	85	78	84	81	76	68	72	63	76	82	86	80	69	76	79	75	86	84	82	71.1	
	Minimum	43	41	26	20	18	28	31	31	34	49	54	48	45	55	55	53	52	47	44	51	47	48	58	60	47	45	46	48	58	60	58	45.2	
Bismarck Airport	Maximum	63	56	48	47	55	64	60	64	74	78	77	78	88	81	82	83	70	71	64	70	77	85	80	77	69	75	82	77	90	90	89	73.0	
	Minimum	44	40	30	28	19	32	32	34	44	50	53	55	46	52	56	55	57	49	46	49	47	52	58	58	53	48	47	57	60	60	59	47.4	
Bottineau	Maximum	58	52	49	48	58	55	65	64	70	81	73	80	87	88	87	86	88	75	61	78	81	75	82	79	80	79	88	87	90	94	86	75.0	
	Minimum	46	35	36	23	16	22	22	29	39	44	51	51	45	41	43	46	45	47	45	44	38	40	59	53	54	54	48	53	55	60	63	43.5	
Carson	Maximum	65	53	50	51	62	62	63	64	74	80	76	77	89	85	86	84	76	80	69	71	80	86	80	76	70	78	82	88	92	88	85	74.9	
	Minimum	45	36	34	17	14	31	27	33	42	45	53	51	47	52	52	55	50	51	41	48	46	50	50	53	50	45	49	52	53	60	57	44.8	
Crosby	Maximum	52	45	33	51	69	58	62	64	75	77	74	72	81	82	83	75	61	49	47	64	72	78	64	66	66	77	85	78	88	90	75	68.2	
	Minimum	46	39	32	23	22	28	31	32	33	44	48	52	47	47	52	45	46	46	45	45	46	45	50	48	46	45	49	50	54	54	57	48.5	
Devils Lake	Maximum	59	58	47	41	51	62	60	64	68	77	74	73	85	82	75	77	71	56	50	59	76	78	84	77	69	73	84	82	92	90	84	69.9	
	Minimum	43	35	25	23	21	30	31	35	42	52	47	55	47	50	53	48	49	42	43	46	51	53	58	60	51	46	53	55	63	61	61	46.2	
Dickinson Airport	Maximum	58	51	49	48	65	56	60	63	76	76	80	72	86	80	81	82	63	67	57	62	75	79	69	62	66	74	81	73	88	88	82	70.0	
	Minimum	38	36	30	22	22	36	30	36	42	44	51	53	48	52	53	54	52	48	44	46	47	51	46	48	45	47	51	54	54	57	55	44.9	
Dunn Center	Maximum	59	50	50	50	66	59	61	66	77	78	82	74	87	82	81	82	58	55	48	62	75	84	70	65	68	75	82	77	89	90	82	70.5	
	Minimum	47	38	34	23	15	20	30	32	34	45	45	49	40	45	50	53	49	44	42	43	44	42	43	45	50	51	45	45	50	51	55	42.4	
Fargo Airport	Maximum	66	53	49	37	38	54	61	65	67	65	65	66	80	83	73	79	70	57	55	66	76	80	84	85	79	77	82	81	86	84	84	69.3	
	Minimum	47	39	28	24	26	28	33	32	43	51	51	54	45	54	51	50	55	46	44	46	54	51	62	63	55	49	47	57	66	63	64	47.7	
Fessenden	Maximum	60	57	54	47	55	61	59	65	68	78	77	71	81	83	75	80	67	66	50	63	74	78	86	76	66	72	82	80	89	89	85	70.8	
	Minimum	48	34	35	23	40	33	34	32	37	51	50	55	43	50	52	53	53	42	46	45	50	57	57	57	56	46	51	49	61	64	59	46.8	
Fullerton	Maximum	68	60	47	42	49	67	62	67	70	78	72	72	83	82	83	80	73	65	65	78	83	87	84	75	78	82	80	88	88	83	83	72.8	
	Minimum	42	44	35	24	22	28	32	34	35	53	54	57	47	55	57	61	55	46	45	50	55	52	59	59	56	48	49	50	61	60	62	48.0	
Garrison	Maximum	58	54	50	48	59	63	61	64	74	79	74	77	88	85	83	83	67	52	49	61	77	82	73	75	69	76	83	77	91	90	90	71.3	
	Minimum	41	39	29	25	17	37	29	35	42	48	49	53	44	50	54	52	52	45	44	46	43	49	55	55	52	44	48	52	58	60	56	45.3	
Golva	Maximum	57	50	49	50	70	53	58	64	78	75	78	74	86	79	81	83	64	71	51	64	74	80	65	63	66	75	79	73	87	87	87	69.7	
	Minimum	39	33	30	21	17	32	30	28	42	42	47	45	42	46	54	49	53	46	45	44	45	40	45	46	44	43	42	51	49	49	55	41.7	
Grafton	Maximum	65	63	61	43	51	63	64	64	70	77	71	72	83	83	74	75	75	68	62	63	78	80	88	85	83	77	86	86	90	92	89	73.3	
	Minimum	48	35	31	23	28	28	32	40	37	51	44	56	44	52	45	48	43	43	43	44	45	48	57	57	59	46	48	53	62	59	64	45.0	
Grand Forks Airport	Maximum	64	59	48	41	48	58	61	62	68	61	67	69	81	78	67	77	72	58	60	63	76	81	85	85	72	76	84	85	89	91	84	70.0	
	Minimum	43	36	26	24	24	29	28	34	38	44	45	47	43	53	49	45	47	46	43	45	52	52	62	60	52	47	48	55	62	63	67	45.5	
Jamestown Airport	Maximum	67	54	46	45	52	66	63	64	71	76	71	72	86	85	81	78	71	55	53	57	75	82	87	83	70	76	81	82	87	87	80	71.0	
	Minimum	38	40	27	23	19	28	34	29	37	50	52	54	40	52	52	50	51	45	42	47	51	54	59	62	50	45	47	50	59	60	62	45.5	
Kenmare	Maximum	55	53	50	50	64	62	61	65	74	79	70	77	85	84	87	79	68	60	50	60	75	78	70	69	79	85	81	92	91	85	71.5		
	Minimum	47	40	34	24	25	35	33	35	44	48	44	51	51	50	56	45	47	45	45	45	48	49	55	50	51	48	55	56	59	57	56	46.0	
Langdon	Maximum	61	60	54	47	52	67	64	68	68	80	77	75	80	80	75	74	72	65	50	61	74	75	85	82	80	71	84	83	87	90	85	71.0	
	Minimum	45	35	27	21	14	29	23	34	37	49	42	53	40	42	49	44	41	42	40	42	49	50	54	58	55	40	48	50	60	55	57	42.2	
Marmarth	Maximum	60	54	51	53	72	69	60	63	80	78	81	79	90	83	85	83	72	74	62	69	75	82	80	65	69	75	80	75	88	90	82	73.0	
	Minimum	44	38	32	28	20	41	31	30	45	47	46	47	48	50	55	58	55	54	48	50	45	48	48	49	41	42	43	58	50	51	58	45.5	
Minot Airport	Maximum	57	51	48	47	60	63	58	64	72	76	65	75	86	82	81	80	70	55	50	59	76	77	74	73	70	77	84	79	93	91	83	70.0	
	Minimum	39	38	30	26	22	39	30	36	42	50	43	55	51	50	57	49	42	44	46	45	47	54	55	49	48	56	59	60	57	58	45.5		
Nott	Maximum	61	52	49	48	63	63	60	65	76	78	77	73	89	85	82	81	77	80	63	80	79	73	82	74	68	75	82	77	89	88	85	73.0	
	Minimum	44	38	28	23	17	34	30	35	42	48	52	52	42	48	55	48	54	48	45	47	51	49	52	47	43	49	52	50	54	56	43.0		
Pembina Airport	Maximum	61	65	50	40	53	62	62	65	70	70	76	72	80	74	78	70	72	54	57	68	79	82	88	85	68	74	86	86	91	91	86	71.0	
	Minimum	46	36	25	22	18	29	28	38	40	47	43	50	43	49	46	44	38	42	45	44	47	52	54	58	54	50	45	51	61	56	60	43.0	
Sharon	Maximum	64	57	49	42	48	62	61	65	66	66	63	70	85	87	70	79	70	64	52	57	77	81	84	82	71	78	87	84	88	90	85	70.0	
	Minimum	48	34	30	22	21	29	32	34	41	49	49	54	45	51	49	48	47	39	40	44	49	52	56	49	57	42	45	52	61	61	62	44.0	
Steele	Maximum	63	64	52	45	53	63	59	64	71	78	71	84	87	83	80	80	74	61	62	67	76	83	86	76	75	72	80	78	85	85	84	72.0	
	Minimum	39	35	34	22	15	27	27	27	36	51	50	54	41	51	51	52	52	41	48	41	48	41	50	50	56	54	41	46	49	56	57	57	43.0
Valley City	Maximum	66	52	49	43	47	65	64	67	70	68	71	70	85	83	83	77	72	63	55	58	77	80	84	83	82	76	80	81	85	87	82	71.0	
	Minimum	49	49	37	25	24	37	37	35	44	51	54	55	45	54	53	52	52	43	43	46	51	52	60	62	56	50	45	48	62	62	65	48.0	
Wahpeton	Maximum	67	68	49	35	36	53	60	67	67	68																							

Daily Precipitation for May 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James	.04	T.	.04	.05	T.						.02	.07		.08	.38	T.		.40	T.	.20		T.	.26	1.69	1.94	.13					.13	5.43	
Casselton	Red.	.24	.15	.24	.05	T.					.20	1.13		.62		.32		.43		.70		.07	.65	.18							.10	.45	4.51	
Cooperstown	Sheyenne		.05	.16	T.						.18	T.		.15	.32				.70		.10	.03	.17	.08	.10					.05	.16	2.12		
Courtenay	James	.06	.03	.06	.02						.05	.10		.14					.81		.10	.03	.17		.19					.06	T.	.15	4.00	
Devils Lake ^{1,5}	Devils Lake	.27		.10	.01	T.	T.	T.			.02	.07	.01		.20		T.	T.	T.	.01	.03	.12	.60	.40	1.70	.35				T.	T.	.15	4.00	
Edgeley	James		.44	.09	.01						.24	.33	.04	T.	.14				2.01		.03	.49	.23	.67						.15	.24	4.00		
Edmore	Devils Lake	.22		.12					T.		.02	.27	T.		.10				.46		.05	.18	T.	.05	.10								1.11	
Ellendale	James		.40	.10	.08						T.	.04		.20				.04	.46	.07	.02	.20		.57	T.					T.	.17	.18	3.01	
Fargo ^{1,5}	Red.	.14	.32	.04	.05				.08		.22	1.87	.53	.07	.46			T.	.13	T.	.02	.50	.05		.19				.01	.02	T.	T.	4.70	
Forman	Sheyenne	.03	.29	.53	.04						.66	1.40			.14										.32						.28	.22	3.91	
Fullerton	James	.03	.40	.12	.04						.07	.26	.03		.28	.08			1.20	.03	T.		T.		.45					.23	1.78	.23	5.23	
Gackle	do		.15								.10	.48	T.	.24	.65				.63		.15			3.00	.58								5.98	
Grafton	Red.	.19		.15	.06				.07		.11		.10		.32	.03			.01	T.	T.	T.	.07	.37	.49								1.96	
Grand Forks Airport ³	do	.05	.11	.05	.07				.02		.18	.15	.27	.05	.13				.01	T.	T.	.29	.02	.88	T.					.21		.42	3.13	
Hankinson ²	do	.26	T.	.55	.10	T.				T.	.02	.05	.51	.04	.54		.01		.25		T.	T.											3.13	
Hannah	Pembina	T.		.10						T.		.03		.12								.05	.05	1.30	.50	1.90					T.	.08	T.	4.05
Hillsboro	Red.	.20	.10	.27	.23				.02		.20	.21	.47		.34				.02	T.	T.	.06	.11		.02	.06					.07	.25	2.63	
Janestown Airport ³	James	T.	.14	.05	.02						.09	.07		.03	.78			T.	.50	T.	.18	.21	.02	.02	.27					.14		.48	3.00	
Langdon	Pembina	.16		.02	.16						.08		.20		.28							.04	.02	.43	T.	1.10							1.95	
Larimore	Red.	.69		.21	T.						.12	.07	.36													.06						.15	3.33	
Lisbon	Sheyenne	.05	.10	.31	.14	.02					.31	.01	1.49		.34	.01	.23		.96		T.	.08				.31					.35		4.71	
Mayville	Red.	.08									.12	.06	.23									.37	.10		.37	.80					.35		2.76	
McHenry	James	.25		.12	.04						.04	.02			.27				.32	.01	.07	.40		.07	.78						.07		2.58	
McLeod	Sheyenne		.10	.60	.03				T.		.17	.17	1.76		.48	.46						.10			.35						.11	.03	4.73	
Oakes ²	James	.31	.07	.45	T.	.03					.40		.25		.40	.05			1.24			.26								.22		.34	.56	4.58
Park River	Red.	.08		.14	.03				T.		.05		.03	.37		.07			T.		.29		.26		.41								1.73	
Pembina Airport ³	do	.04	.06	.16	.03				T.	.03	T.	.05	.01	.02		.01			.01	T.	T.	T.	.08	.35	.01	.26					.04		T.	1.16
Petersburg	do	.29		.18	.04					.01	.18	.25	.03			.15					T.	.18		.08	.23	.08					.12		.35	2.17
Sharon	do	.08	.01	.18	.04				T.		.10	.06	.07	.03		.10			T.	.28	T.	.04	.50	.05	.01	.05					.28	.29	2.17	
Valley City	Sheyenne	.11	.05	.20	.05				T.		.15	.39	.34		.15	.58			T.	.85		.02	.35	.04	.15						.11	T.	3.54	
Wahpeton	Red.	T.	.22	.52	.02						.12	.03	.17		.10	.20			T.	.39	T.		.03	.02		.59	T.			.03		.03	2.47	
Middle Division																																		
Ashley ³	Missouri	T.	.24	.01	.04					T.	.15	.01	T.	.16				T.	.02	.01	.10	T.	T.	.18	.10	.60				.06		.15	T.	1.83
Bisbee	Devils Lake	.95			T.				.07		.21	.02			.11				T.		.04	.47	.80	.90									3.57	
Bismarck ^{1,5}	Missouri	.01		.03	T.				.02		T.	.13			.24			.01	.06	T.	.01	.01	T.		1.70	.23							T.	2.45
Bottineau ²	Mouse	.30	.04	T.					.15	.21			1.06							.04	.03	.39	.11	.44	1.74									4.51
Butte	do	T.									.04			T.	.19				.04	.24	.03	T.			.38	.70							1.62	
Carsou	Heart			.03							.14			.04	.11			.57						1.21	.40							.05	2.55	
Center	Missouri			.10							.14	.03			.29			.22		.11		.03		.98	.26						.06	.29	2.51	
Drake ²	Mouse								.08		.14	.03			.23				.15		.04		.11	.37	T.	.34	.59						1.45	
Dunseith	do	.03		T.	T.				.39	T.	.02	.04	.11						T.			.03		.22							.15			2.32
Eckman	do	.04		.02					T.	.02	.04	.11								.03		.14	.13	.24	.88	.91								0.44
Fessenden	James										T.	1.60		T.	.27			T.				.14	.13	.24	.88	.91								4.37
Fort Yates	Missouri	.07		T.							.02		.01		.02			T.	.01	.09	T.	.08	.01	T.	.04	.34					.02	.05		2.15
Foxholm	Mouse	.07		T.							T.	.25			.20			.04	.39	.54				.33	.09									0.76
Garrison ³	Missouri	.08		.03							.03	T.	.24	.37		.12		.15	T.	.01	.09	.05		.30	.77							1.30	3.25	
Granville	Mouse	.04									.04		.10						.04	.11	.07	.81	.81	.31	.83							.24	2.41	
Hansboro	Devils Lake	.31		T.					.02		.06	.01		.10					.03	.06		.11	.07	.81	.31	.83					.01	.05	.01	4.22
Linton	Missouri	.03		T.							.23	.02	.05	T.	.01			.05	T.	.03	.06		.16	.89	.04	1.61								4.76
Maddock	Sheyenne	.19		.02							.76	T.	.02		.20			.53	.04	T.	.18		.18	.14	.91									3.13
Mandan ²	Missouri	.02		.01					T.		.02		.03		.25			.62	.02	.57		.03	T.	.12	.13									1.96
Max ²	do	.13	.04								.02		.03		.42			.27				.05	T.	.67									.09	2.02
McClusky	do			T.							.05		.01		.16	T.		T.	.19	.22		.05	T.	.17	.06	.49					.03		.32	1.62
Minot Airport ³	Mouse	.04		.05																														

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Nat'l Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

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NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIII BISMARCK, N. D., JUNE 1944 No. 6

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GENERAL SUMMARY

June 1944 was the second wettest month in the climatological history of North Dakota, and the precipitation in the western and northern sections exceeded all previous records. Twelve stations in the northwestern part of the state reported more than 10 inches and Mohall, in Renville County, had 14.01 inches. This is the greatest amount ever recorded at a North Dakota station in one month and only 1.18 inches less than the average annual Mohall precipitation. Five counties in the southeastern part of the state had below normal precipitation. The precipitation was well distributed throughout the month but with heavy amounts on the 3-4th, 17-18th, and 26-27th. Temperatures averaged slightly below normal and light to heavy frosts occurred at many stations on the 6th, but damage was slight. Some hail damage also occurred but losses were not unusually heavy. High winds and tornadoes were reported in Logan and LaMoure counties. About 90 farms were damaged with some farm buildings near Napoleon completely destroyed. Due to heavy rainfall, rivers ran high and some flooding occurred in the Red River Valley. The weather was very favorable for crops.

TEMPERATURE

The mean temperature for the state was 61.7°, or 1.2° below the 1892-1944 average for June. The mean temperature for the eastern division was 63.4°; for the middle division, 61.6°; and for the western division, 60.2°. The highest mean temperature was 66.9° at McLeod, and the lowest, 57.7° at Golva, making a range in mean temperature of 9.2°. The absolute range was 63°, from 93° at Hankinson on the 24th and 25th, to 30° at Dickinson on the 6th. The average daily excess in temperature for the state since January 1, 1944, is 2.0°.

PRECIPITATION

The average precipitation for the state was 6.43 inches, or 2.91 inches more than the 1892-1944 average for June. In the eastern division the average amount was 4.25 inches; in the middle division, 7.10 inches; and in the western division, 7.94 inches. The greatest monthly amount reported was 14.01 inches at Mohall; the least was 1.61 inches at Jamestown. The greatest amount recorded in any 24 consecutive hours was 4.75 inches at Portal on the 26-27th. The accumulated excess in precipitation for the state since January 1, 1944, is 2.41 inches. The average snowfall was a trace.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	2	2	16	11	7	1	1	1	1	3	17	21	24	1	3	10	12	9	3	6	7	6	1	3	4	2	2	1	1	1	1
Lunar halos	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hail	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thunderstorms	19	25	22	1	2	2	3	1	1	1	3	4	10	12	3	20	6	30	7	1	27	6	10	16	5	11	15	22	1	2	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.35	29	29.15	3	11.6	45	sw.	1	86	87	64	60	60	118
Devils Lake	30.35	29	29.23	27	8.3	32	nw.	28	86	89	67	66	44	147
Fargo	30.38	29	29.29	27	12.3	41	s.	2	87	87	63	62	67	81
Williston	30.26	29	29.32	1	7.7	28	ne.	17	83	86	62	55	62	155

† And other dates.

COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	60.5	94	28	3.59	4.44	2.03	3.35	0	8	11	9	10	7
1893...	67.4	103	33	3.25	4.28	2.60	3.38	0	9	13	10	7	7
1894...	68.8	103	25	4.08	2.31	3.93	3.44	0	7	17	6	7	7
1895...	59.7	97	29	5.37	4.54	4.11	4.67	0	12	8	13	9	5
1896...	65.6	97	37	3.06	4.33	4.68	4.02	0	9	16	9	5	5
1897...	61.7	109	20	4.40	4.40	2.45	3.75	0	9	11	10	9	9
1898...	62.6	105	26	3.17	3.21	3.18	3.19	0	9	10	10	10	10
1899...	62.2	105	30	3.20	4.25	3.98	3.81	0	10	12	11	7	4
1900...	66.9	109	27	1.59	1.54	1.04	1.39	0	5	15	11	4	7
1901...	61.6	95	22	7.20	5.31	5.90	6.14	0	15	10	11	9	9
1902...	58.0	97	28	3.67	3.75	3.53	3.65	0	11	12	9	9	9
1903...	62.4	96	27	1.02	1.52	1.78	1.44	0	4	17	8	5	5
1904...	61.4	100	30	5.95	5.92	4.82	5.56	0	11	13	8	9	9
1905...	59.7	97	32	4.49	4.64	3.87	4.33	0	12	10	7	13	13
1906...	62.0	95	32	3.80	4.21	6.34	4.78	0	11	13	8	9	9
1907...	61.9	95	25	3.47	2.53	2.80	2.93	0	10	12	10	8	8
1908...	60.4	93	27	2.91	3.63	3.70	3.41	0	10	12	9	9	9
1909...	62.9	98	28	3.94	2.49	3.92	3.45	0	10	12	11	7	7
1910...	67.3	111	19	1.26	1.85	3.00	2.04	0	6	16	9	5	5
1911...	66.9	108	25	3.13	3.42	2.61	3.05	0	9	13	10	7	7
1912...	61.8	104	28	2.27	2.11	1.65	2.01	0	6	16	8	6	6
1913...	65.8	101	27	2.85	1.98	2.52	2.45	0	8	16	9	5	5
1914...	62.2	93	29	5.67	7.13	6.64	6.48	0	13	9	11	10	10
1915...	56.7	94	20	5.59	5.11	3.73	4.81	0	12	9	12	9	9
1916...	58.0	92	29	4.06	3.51	4.05	3.87	0	11	10	11	9	9
1917...	59.7	103	19	2.38	1.88	1.96	2.07	0	8	13	11	6	6
1918...	63.3	102	27	2.23	1.53	0.97	1.58	0	7	14	11	5	5
1919...	67.2	108	22	3.15	1.99	1.50	2.21	0	5	15	10	5	5
1920...	62.2	98	26	3.64	3.74	3.20	3.53	0	11	12	12	6	6
1921...	68.2	108	30	3.28	2.83	4.74	3.62	0	9	14	10	6	6
1922...	63.5	108	30	3.38	3.55	4.44	3.79	0	9	15	8	7	7
1923...	66.1	100	30	4.79	2.83	4.21	3.94	0	8	13	12	5	5
1924...	58.6	89	26	3.45	4.51	4.17	4.04	0	11	10	12	8	8
1925...	61.5	98	30	7.72	5.43	4.84	6.00	0	14	11	10	9	9
1926...	60.7	104	22	2.66	2.47	2.71	2.61	0	9	13	9	8	8
1927...	61.2	99	22	3.81	2.34	2.30	2.82	0	9	11	13	6	6
1928...	58.2	92	24	4.83	5.30	4.63	4.89	0	12	10	10	10	10
1929...	61.4	98	21	1.10	1.10	2.12	1.44	0	7	16	9	5	5
1930...	63.3	96	30	2.31	3.42	3.53	3.09	0	10	13	11	6	6
1931...	68.4	110	27	2.93	2.05	2.07	2.35	0	8	14	10	6	6
1932...	67.0	98	34	3.33	3.61	4.83	3.92	0	10	14	10	6	6
1933...	70.7	110	33	1.99	1.66	1.67	1.77	0	7	18	10	2	2
1934...	64.3	100	29	3.74	2.85	2.54	3.04	0	11	12	10	8	8
1935...	60.3	99	25	3.65	2.70	2.77	3.01	T.	10	11	12	7	7
1936...	66.4	110	28	1.41	1.40	1.20	1.34	0	6	16	10	4	4
1937...	63.5	109	25	3.04	5.62	3.43	4.03	T.	7	15	9	6	6
1938...	64.2	99	27	1.82	2.87	3.49	2.73	0	9	11	11	8	8
1939...	60.1	99	29	5.44	4.67	3.67	4.59	0	12	10	11	9	9
1940...	63.1	102	27	2.02	2.10	2.60	2.24	0	9	13	11	6	6
1941...	64.2	97	32	5.86	4.91	5.85	5.54	0	12	12	9	9	9
1942...	60.1	90	27	2.81	2.81	3.75	3.12	0	11	9	12	9	9
1943...	60.4	102	28	4.61	5.07	5.54	5.07	1.3	13	8	11	11	11
1944...	61.7	93	30	4.25	7.10	7.94	6.43	T.	13	10	9	11	11
Period	62.9	111	19	3.56	3.49	3.50	3.52	T.	9	13	10	7	7

NAT. HIST.

Climatological Data for June 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	63.6	+0.2	92	17	35	8	6.23	+2.78	3.50	27	0	12	15	5	10	ne.	Soo Line Agent.
Casselton	Cass	934	48	65.3	+1.4	92	267	38	8	3.16	-0.43	0.90	1-2	0	11	20	7	3	s.	C. Hayford.
Cavalier	Pembina	894	34	63.0	.....	90	1	39	57	4.74	+1.66	1.41	3-4	0	13	8	14	8	se.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	.....	.....	.....	.....	3.12	-0.36	0.72	26	0	9	17	6	7	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	47	64.9	+1.7	91	17	36	8	3.89	+0.62	1.32	27	0	8	8	7	15	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	14	.....	.....	.....	.....	.....	.....	5.49	+2.28	2.45	26-27	0	12	11	12	7	e.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	61.8	-0.1	88	1	36	57	5.80	+2.24	1.16	23-24	0	15	7	7	16	ue.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	63.5	-0.1	93	25	39	67	2.33	-1.34	1.08	3	0	9	14	6	10	sw.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,524	20	59.0	-3.3	89	1	32	67	4.36	+1.25	1.04	3	0	11	16	6	8	e.	Mike Davis.
Ellendale	Dickey	1,457	49	63.0	-1.8	88	17	39	6	4.28	+0.87	1.44	227	0	13	12	7	11	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	17	65.4	+1.0	91	25	41	19	3.41	-0.64	1.59	2-3	T.	15	4	16	10	s.	U. S. Weather Bureau.
Fortman	Sargent	1,249	51	65.7	+0.7	89	25	39	6	3.84	+0.24	1.27	17	0	11	16	8	6	s.	Helge Dyste.
Fullerton	Dickey	1,439	46	64.5	+0.3	90	147	40	57	2.94	-0.97	1.20	2-3	0	11	14	7	9	s.	F. O. Alin.
Gackle	Logan	1,951	14	62.7	.....	90	25	36	6	2.20	-1.27	1.22	26-27	0	3	9	9	12	e.	Jack Dixon.
Grafton	Walsh	827	52	63.7	0.0	89	1	39	5	5.69	+2.44	1.17	4-5	0	14	7	9	14	se.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	64.5	+1.1	85	17	39	5	4.83	+1.55	1.02	5	0	13	12	11	7	s.	University of N. Dak.
Grand Forks Apt., 2 1/2 mi. W	Grand Forks	832	4	63.6	.....	88	1	39	8	4.18	.....	0.91	5	0	14	4	15	11	se.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	66.8	-0.1	93	247	39	6	4.86	+1.28	1.87	3	0	12	11	5	14	w.	Soo Line Agent.
Hannah	Cavalier	1,568	52	60.0	-0.5	84	17	37	57	5.81	+2.40	1.40	17-18	0	11	7	10	13	sw.	A. E. Prior.
Hillsboro	Trall	901	44	64.6	-0.1	91	25	40	8	4.82	+1.40	1.40	12-13	0	11	15	8	7	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	52	64.5	+0.8	92	25	39	57	1.61	-1.89	0.45	3	0	9	7	14	9	e.	N. Dak. State Hospital.
Jamestown Airpt., 2 mi. NE	Stutsman	1,491	4	62.5	.....	90	25	39	57	1.78	.....	0.43	2-3	0	12	6	10	14	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	62.0	.....	90	17	34	8	3.16	.....	0.91	26-27	0	10	5	14	11	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	60.6	0.0	85	27	34	8	3.97	+0.73	0.76	15	0	15	8	11	11	sw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	61.4	-1.5	91	1	38	57	5.24	+1.68	1.42	27	0	16	7	9	14	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	64.7	+0.3	90	27	39	6	3.20	-0.70	0.98	4	0	13	14	3	13	sw.	J. O. Halverson.
Mayville	Trall	975	48	64.5	0.0	89	17	39	8	6.33	+2.96	1.39	26-27	0	11	9	13	8	n.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	61.4	-0.4	88	1	36	57	4.25	+0.78	1.07	26-27	0	12	7	11	10	sw.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	33	66.9	+1.6	92	25	48	12	3.46	-0.37	1.10	3	0	9	18	4	8	sw.	J. G. Carlson.
McVille	Nelson	1,467	14	.....	.....	.....	.....	.....	.....	4.99	.....	0.88	27	0	17	4	18	8	ne.	A. M. Casad.
Milnor	Sargent	1,117	5	63.2	.....	92	25	38	67	4.85	+1.03	1.55	3	0	12	17	12	1	se.	E. W. Wilson.
Oakes	Dickey	1,318	15	63.4	-1.9	87	25	39	6	7.00	+3.36	2.05	2-3	0	14	12	7	11	se.	F. H. Murray.
Park River	Walsh	998	40	61.2	-1.9	88	1	37	5	5.35	+2.09	1.94	15	0	13	11	8	11	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	61.7	-1.1	89	1	39	57	5.87	+2.68	1.42	4-5	0	13	4	14	12	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	61.0	.....	90	1	37	5	3.84	+0.34	0.65	26	0	13	4	17	9	se.	T. M. Rykken.
Sharon	Steele	1,516	20	63.8	+0.8	90	25	38	67	5.42	+1.81	2.10	20	0	13	7	13	10	e.	Nels O. Grefshelm.
Valley City	Barnes	1,229	38	65.8	+1.7	91	25	39	5	2.81	-0.57	1.35	3	0	12	18	6	6	sw.	L. C. Robertson.
Wahpeton	Richland	962	52	66.8	+1.0	88	17	41	87	5.45	+1.87	2.97	2-3	0	10	12	9	9	se.	W. J. Cavanaugh.
Average for Eastern Division				63.4	-0.8	93	247	32	67	4.25	+0.69	8.50	27	T.	12	11	9	10	se.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	61.0	-2.2	87	17	36	6	3.53	+0.11	1.02	2-3	0	13	4	12	14	s.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	62.0	-0.1	87	1	34	5	7.11	+3.75	1.40	27	0	14	11	7	12	ne.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	63.4	-0.8	88	17	38	6	4.67	+1.44	2.36	17-18	0	13	8	9	13	se.	U. S. Weather Bureau.
Bismarck Airpt., 2 1/2 mi. SE	Burleigh	1,650	5	63.2	-0.3	90	1	36	6	4.85	+1.50	1.97	17-18	0	13	8	9	13	se.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	61.6	-0.2	85	1	35	6	12.03	+8.84	2.64	26-27	0	16	20	0	10	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	60.9	-1.6	83	17	34	8	11.55	+8.15	3.08	17-18	0	16	13	8	9	se.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	32	62.6	-1.1	90	25	31	6	6.31	+2.83	1.36	4	0	12	17	4	9	se.	J. W. Evans.
Center	Oliver	2,100	6	60.9	.....	87	25	33	6	7.38	.....	2.01	17-18	0	14	7	16	7	se.	Fred L. Kleinz.
Drake	McHenry	1,634	15	61.6	-2.2	88	17	37	6	5.90	+2.74	1.32	17	0	13	13	5	12	sw.	H. G. Kring.
Dunseith, 2 miles NNE	Rolette	1,682	48	59.2	-2.2	81	17	35	47	7.23	+4.22	1.50	26	0	12	15	2	13	ne.	Hubert Downs.
Eckman	Bottineau	1,500	39	60.7	-1.3	86	1	38	8	10.44	+7.46	2.28	26-27	0	14	10	8	12	se.	E. R. Sherman.
Fessenden	Wells	1,610	32	62.2	-0.4	88	17	37	5	5.22	+1.74	1.55	17-18	0	10	14	7	9	n.	John V. Zuber.
Fort Yates	Sioux	1,670	44	63.8	-2.8	90	1	33	6	5.49	+2.02	1.20	3	0	7	15	6	9	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,657	23	61.0	-0.9	83	17	38	57	10.14	+7.16	3.30	26-27	0	16	4	13	13	ne.	E. C. Bierbaum.
Garrison	McLean	1,911	67	60.8	-2.1	84	247	37	6	6.99	+3.57	2.22	27	0	13	7	11	12	e.	Mae H. Vorachek.
Granville	McHenry	1,504	37	61.4	-1.3	84	17	33	5	10.06	+6.87	2.31	26-27	0	16	11	10	9	nw.	Fred Roble.
Hansboro	Towner	1,597	36	59.2	-1.6	82	1	32	5	8.02	+4.70	2.00	26-27	0	15	12	6	12	ne.	W. E. Disher.
Harvey	Wells	1,596	41	.....	.....	.....	.....	.....	.....	4.88	+1.51	1.37	17-18	0	13	13	7	10	ne.	Orville Hoksach.
Leeds	Benson	1,515	4	62.6	.....	88	1	35	5	5.39	.....	0.85	1	0	17	5	17	8	ne.	John Dalmage.
Linton	Emmons	1,711	27	64.6	-0.6	90	17	32	6	6.35	+3.08	1.90	26	0	12	8	10	12	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	62.0	-0.2	87	1	36	8	3.88	+0.49	1.04	17-18	0	12	5	12	13	ne.	A. T. Felland.
Mandan, 1 1/2 miles SW	Morton	1,750	30	62.2	-2.2	88	1	35	6	5.56	+2.28	2.82	17-18	0	13	12	4	14	se.	No. Gt. Plains Field. Sta.
Max	McLean																			

Climatological Data for June 1944—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Epping	Williams	2,224	33	60.8	-2.3	89	1	34	6	8.19	+4.88	2.65	26	0	11	17	7	6	se.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	7							7.12	+3.39	2.16	17-18	0	13	12	10	8	se.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	59.8		89	1	35	6	9.67	+6.25	1.99	17-18	0	15	8	7	15	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	57.7	-4.9	89	30	34	7	6.34	+2.75	1.99	17-18	0	15	6	8	16	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35																	John S. Sorenson.
Halliday	Dunn	2,073	3							9.26		2.67	26-27	0	13	15	7	8	se.	John Kisse.
Hettinger	Adams	2,675	36	61.2	-2.8	88	1†	33	6	6.63	+3.47	1.65	22	0	9	12	11	7	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	60.8	-1.6	85	1	38	5	10.67	+7.78	3.22	27	0	16	14	3	13	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	60.9	-2.5	88	30	35	6	6.79	+3.66	1.45	22	T.	15	9	6	15	se.	S. P. Grane.
Medora	Billings	2,271	28	63.6		90	30	34	6	7.70	+4.28	1.86	17-18	0	13	13	10	7	w.	Harry Roberts.
Mott	Hettinger	2,424	36	61.8	-3.2	91	1	33	6	6.71	+3.46	1.70	17	0	14	17	5	8	nw.	P. G. Wick.
New England	Hettinger	2,621	49	60.4	-3.2	88	1†	32	6	8.69	+5.53	2.06	3	0	12	9	10	11	ne.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		3	59.3		81	1	35	6	7.84		2.03	17-18	0	14	16	4	10	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	60.2	-1.8	83	24†	34	6	6.93	+3.44	2.33	27	0	14	7	15	8	se.	C. E. Shubert.
Portal	Burke	1,954	38	59.2	-1.4	85	30	35	5	12.39	+9.30	4.75	26-27	0	15	7	12	11	sw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	61.0	-0.5	90	24	39	5†	9.50	+6.21	3.35	26-27	0	13	10	14	6	w.	Geo. B. Gee.
Richardton, 1 1/2 miles N.	Stark	2,467	27	59.4	-3.7	84	24†	35	5	8.80	+5.33	2.15	12	0	13	6	13	11	se.	Assumption Abbey.
Ryder	Ward	2,108	15							8.34	+5.23	2.30	17-18	0	10	12	8	10	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	59.4	-3.9	84	24	34	6	6.43	+3.06	1.60	26-27	0	13	5	16	9		H. J. Bugge.
Stanley	Mountrail	2,258	6	58.4		83	24†	35	5†	9.07		3.15	26-27	0	12	11	11	8	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	15							6.07	+3.02	1.49	26-27	0	12	3	18	9	ne.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15																	H. Francis Cannon.
Trotters	Golden Valley		18							4.79	+1.46	0.84	26-27	0	13	4	20	6	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	60.8		85	24†	32	6	7.34		2.26	26-27	0	12	12	9	9	ne.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	60.8	-2.3	87	30	36	6	9.50	+6.35	2.42	26-27	0	12	14	10	6	w.	J. C. Zeller.
Wildrose	Williams	2,258	16							9.40	+6.30	3.36	27	0	18	14	8	8	e.	Jonathan Winkjer.
Williston	Williams	1,878	64	61.2	-1.5	91	30	39	4	7.88	+4.45	2.66	26-27	0	13	6	10	14	se.	U. S. Weather Bureau.
Average for Western Division				60.2	-2.5	91	1†	30	6	7.94	+4.44	4.75	26-27	T.	14	10	10	10	se.	
Average for the State				61.7	-1.2	98	24†	30	6	6.48	+2.91	4.75	26-27	T.	18	10	9	11	se.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for June 1944																																		
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum...	87	81	73	60	46	66	69	64	69	66	73	74	76	85	80	68	62	57	70	76	76	61	80	83	87	81	69	73	76	78	72.2		
	Minimum...	58	58	57	44	37	36	40	43	39	46	55	58	58	50	56	53	50	43	37	49	50	50	52	55	62	58	47	48	48	55	49.7		
Bismarck Airport	Maximum...	90	83	75	60	53	68	71	67	72	69	74	73	76	85	80	74	63	43	73	78	70	63	79	87	79	65	73	80	80	73.7	70.0		
	Minimum...	57	59	60	42	40	36	43	47	43	55	56	57	53	55	62	58	51	45	43	56	56	54	54	57	63	63	52	50	55	63	52.8	49.4	
Bottineau	Maximum...	85	84	77	78	49	68	72	74	78	73	74	72	79	79	73	78	75	68	74	70	65	67	78	79	80	68	59	74	79	84	73.8	73.8	
	Minimum...	60	62	53	40	37	35	40	39	42	43	53	55	60	51	55	53	45	44	42	50	50	49	49	55	54	57	52	46	51	60	49.4	49.4	
Carson	Maximum...	89	82	85	60	56	66	69	68	70	72	75	74	83	80	73	69	64	43	39	53	55	52	52	54	58	54	48	42	48	59	75.5	75.5	
	Minimum...	51	57	57	44	36	31	41	44	45	53	54	56	49	55	57	55	47	43	39	53	55	52	52	54	58	54	48	42	48	59	49.6	49.6	
Crosby	Maximum...	78	74	54	42	59	68	70	69	69	67	78	63	72	80	67	66	51	66	70	74	65	69	79	78	83	59	50	74	71	85	68.3	68.3	
	Minimum...	59	53	53	39	39	41	46	38	41	48	48	54	56	48	53	50	39	42	39	46	53	52	51	52	56	59	49	47	49	54	48.5	48.5	
Devils Lake	Maximum...	88	84	69	64	45	68	68	71	75	77	71	67	77	82	67	72	69	67	62	80	77	82	79	68	72	79	68	72	79	82	71.9	71.9	
	Minimum...	62	66	51	44	36	39	44	36	45	48	58	55	60	55	58	54	48	47	43	50	54	52	51	58	64	60	51	52	53	62	51.9	51.9	
Dickinson Airport	Maximum...	86	81	67	46	56	65	68	64	68	68	67	69	71	78	74	73	61	61	72	76	67	60	77	85	86	65	58	71	78	84	70.3	70.3	
	Minimum...	54	56	43	39	37	36	42	44	42	52	54	57	54	51	57	54	43	42	42	53	52	53	50	58	58	56	47	45	49	59	49.3	49.3	
Dunn Center	Maximum...	85	80	64	47	58	67	72	65	70	69	72	65	72	78	73	74	55	62	70	75	69	58	76	82	82	65	53	70	75	82	69.5	69.5	
	Minimum...	49	51	56	42	37	34	36	40	35	38	49	57	54	49	51	51	52	49	40	44	50	50	50	52	55	58	51	45	46	49	47.1	47.1	
Fargo Airport	Maximum...	88	88	69	75	56	68	72	70	74	73	74	77	80	86	82	79	72	59	73	75	75	78	67	82	88	91	87	79	71	81	83	76.6	76.6
	Minimum...	64	62	57	56	43	44	47	41	48	49	59	58	64	58	61	56	54	46	41	54	58	50	56	55	63	62	56	54	53	61	54.3	54.3	
Fessenden	Maximum...	88	88	83	61	50	65	71	65	72	72	68	68	78	82	79	75	73	59	71	71	70	66	79	82	85	80	66	72	77	82	73.3	73.3	
	Minimum...	60	61	60	49	37	38	45	38	43	46	51	58	57	58	60	53	48	44	43	50	53	50	49	52	63	58	51	47	52	58	51.1	51.1	
Fullerton	Maximum...	87	82	78	65	55	67	72	68	73	72	75	79	79	90	79	78	68	64	72	77	79	69	79	87	90	81	74	73	81	81	75.8	75.8	
	Minimum...	62	60	60	55	40	40	45	44	44	52	57	58	55	62	54	54	54	51	41	47	47	57	52	53	57	60	63	61	49	53	57	53.2	53.2
Garrison	Maximum...	82	81	72	53	57	68	73	67	71	68	75	64	76	81	76	77	59	64	70	77	72	67	79	84	84	67	58	77	77	82	71.9	71.9	
	Minimum...	55	60	53	40	38	37	39	39	42	52	54	57	51	51	57	51	48	44	38	52	52	52	50	53	61	58	50	48	50	59	49.7	49.7	
Golva	Maximum...	83	73	61	44	56	64	65	66	66	70	72	71	71	77	72	70	66	60	76	75	65	60	75	82	84	65	59	72	78	89	69.6	69.6	
	Minimum...	52	53	40	36	36	35	34	42	35	51	46	51	50	46	53	50	43	41	36	52	49	50	47	53	52	54	47	42	43	54	45.8	45.8	
Grafton	Maximum...	89	88	84	70	68	67	67	72	77	75	75	70	78	84	83	68	68	56	75	74	65	65	80	76	87	85	76	71	81	83	75.1	75.1	
	Minimum...	64	63	56	50	39	41	48	40	47	46	51	57	62	55	59	54	49	47	44	47	51	51	52	55	60	59	62	52	49	56	52.4	52.4	
Grand Forks Airport	Maximum...	88	86	69	77	60	66	67	71	78	76	68	73	80	86	70	73	63	57	75	75	69	66	80	76	86	87	77	69	82	84	74.2	74.2	
	Minimum...	66	67	54	53	41	41	44	39	46	49	53	59	63	57	60	54	54	41	40	50	52	52	54	56	62	61	53	53	51	57	52.3	52.3	
Jamestown Airport	Maximum...	89	85	75	62	56	65	70	66	71	70	70	72	78	85	76	74	60	58	73	76	78	61	78	86	90	83	70	73	78	80	73.3	73.3	
	Minimum...	62	62	60	56	39	46	39	42	50	57	56	55	53	56	50	51	46	40	47	52	52	53	53	54	60	57	51	51	51	55	51.1	51.1	
Kenmare/	Maximum...	85	83	53	45	60	70	72	67	70	69	76	68	75	79	70	77	52	67	71	75	70	70	80	80	82	60	58	75	76	84	70.0	70.0	
	Minimum...	58	61	51	41	38	40	47	39	44	53	49	56	57	53	57	52	44	45	45	54	53	53	54	55	64	58	50	48	52	60	51.0	51.0	
Langdon	Maximum...	82	85	85	54	49	68	66	72	75	74	72	67	79	77	75	70	68	53	71	70	65	67	78	76	82	80	70	72	78	80	72.2	72.2	
	Minimum...	62	62	51	45	35	35	44	34	42	47	50	56	61	52	56	54	44	44	37	49	39	48	49	51	55	62	51	43	47	67	49.3	49.3	
Marmarth	Maximum...	87	77	70	55	56	65	64	65	65	70	73	73	80	75	72	70	63	74	77	71	64	77	85	87	75	64	70	79	88	72.2	72.2		
	Minimum...	52	50	54	38	38	35	40	45	44	53	50	55	55	53	54	56	48	44	40	54	54	56	46	51	55	62	51	43	47	67	49.3	49.3	
Minot Airport	Maximum...	84	85	65	48	54	67	71	66	72	66	73	65	75	80	77	77	55	64	71	74	65	64	81	78	84	65	56	73	77	83	70.0	70.0	
	Minimum...	58	62	46	38	38	42	46	40	45	53	57	57	56	54	58	51	46	44	44	52	54	50	53	55	64	54	47	47	54	60	50.0	50.0	
Mott	Maximum...	91	85	74	60	60	66	66	66	69	70	72	74	80	78	72	66	62	73	78	74	61	78	85	88	76	68	72	80	84	70.0	70.0		
	Minimum...	50	57	57	42	38	38	45	42	54	55	57	50	53	58	56	48	44	40	55	55	50	50	52	58	64	51	43	46	60	50.0	50.0		
Pembina Airport	Maximum...	89	87	66	64	55	63	64	73	80	78	70	74	77	80	71	66	60	53	77	70	63	65	75	77	84	81	79	68	83	85	72.2	72.2	
	Minimum...	62	62	49	46	39	40	43	39	49	48	52	55	60	56	57	52	47	46	49	52	50	49	53	58	57	51	51	48	57	50.0	50.0		
Sharon	Maximum...	88	86	76	70	57	72	71	70	77	73	72	72	76	87	77	78	62	60	79	77	76	63	82	86	90	86	74	72	83	83	75.1	75.1	
	Minimum...	61	63	55	53	39	38	43	38	48	49	55	57	60	53	61	51	50	47	39	51	51	50	49	54	59	64	54	49	52	59	61.1	61.1	
Steele	Maximum...	86	81	76	59	54	65	69	65	70	67	71	70	75	84	75	71	65	60	69	76	72	63	76	84	85	81	76	71	76	78	72.2	72.2	
	Minimum...	56	56	58	49	36	33	38	38	40	47	48	54	54	50	58	53	49	46	48	52	51	49	50	53	58	57	50	46	50	57	49.3	49.3	
Valley City	Maximum...	89	87	83	87	61	68	71	66	73	72	71	75	79	86	83	77	75	61	75	77	79	77	80	88	91	88	83	72	82	86	78.9	78.9	
	Minimum...	63	62	61	58	39	39	46	43	45	45	58	58	58	56	64	55	52	52	45	56	52	53	55	61	61	66	55	52	56	53	53.3	53.3	

Daily Precipitation for June 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James	.09	.25		.93	.21	.19	T.						.35	.08				.43	.05			.09	.06									6.23
Casselton	Red	.90	.80			.21	.12	.09						.15				.34	.05			.15	.11										3.16
Cooperstown	Shayenne	T.		.82		.30	.05							.08				.33	.05			.29											3.89
Courtenay	James	.46	.90			.12	.17	.31						.05				.75	.17			.04	.04										5.48
Devils Lake ^{1 5}	Devils Lake	T.	T.	.49	.50	.43	T.							.01	.08			.83	.08			.16	.01	1.10	.06	.27	.06	.86	T.				5.80
Edgeley	James	.41	1.05	T.	T.									.15				.08	.04			.01	.02					.34					2.33
Edmore	Devils Lake	T.		1.04	.08	.58	T.							T.	.13			.65	.10			.23	.30	T.	.43	T.	.67						4.36
Ellendale	James	.16	1.04	.06	.06									.32				.34	.04			.07	1.16	.28	.01	.17	.29	.18					4.28
Fargo ^{1 5}	Red	.02	.92	.77	.15	.02	T.							.01	.21	.05		.34	.04			T.	.23	.01	.17	.29	.18						3.41
Forman	Shayenne	.10	.03	1.16	.10	.12								T.		.08		.12	.06			T.	.31	.01	.17	.29	.18						3.84
Fullerton	James		1.20	T.	.07									.25			.08	.06	.43	.02		.04	.63			.30	.11	.02					2.94
Gackle	do			.68																			.30										2.20
Grafton	Red	.07	.70	.24	.93										.18	.74	T.	.12	.57			.31	.47	.49	.17	.54	.16						5.69
Grand Forks Airport ³	do	T.	.14	.42		.91	T.							.38	.08	.04		.45	.25			.31	.05	.20	.04	.71	T.						4.18
Hankinson ²	do	.11	.02	1.87	1.38	.01	.09							.03	.24				.29	.02			.47										4.86
Hannah	Pembina	.30	.21	.35	.50	.60								.12				.91				.12	T.										5.81
Jillsboro	Red	.02	.16	.37	T.	.14								1.40				.82	.14			.14	.02	T.	.10	.10							4.82
Jamestown Airport ³	James	.02	.16	.37	T.	.14								.05	.05			.03	.40	.02		T.	.25					.86	T.				1.78
Langdon	Pembina	.10	.39	.22	.29									.45		.72	.04	.01	.62			.15	.01		.15	.12							3.97
Larimore	Red	.15	.34	.02	.91	.18	.27							.28	.03	.27		.10	.49	.01		.20	.11		.03	.40	.22						5.24
Lisbon	Shayenne	T.	.06	.28	.98	.09	.17							.12				.28	.03	.27		.10	.49	.01	.02	.51	.42						3.20
Mayville	Red	.50	.69	.82	.11	.35								.12				.28	.03	.27		.10	.49	.01	.02	.51	.42						6.33
McHenry	James	.13	.09	.82	.11	.35								.08				.39	.20			.30	.16	.65	.04	.06	.23						4.25
McLeod	Shayenne	.03	.07	1.10		.50								.08				.76					T.	.48					.34				3.46
Oakes ²	James	.05	.20	2.05	.43	.05	.06							.26	.05	.03		.76				1.95		.05	1.12	T.	.26	T.	.59	T.	.11		7.00
Park River	Red	.12	.08	.53	.26	.28								.34		1.94		.07	.69			.19		.10	T.	.49	T.						5.85
Pembina Airport ³	do	.12	.12	1.12	.17	1.25								T.	.46	.64	T.	.03	.85			.22	T.		.04	T.	.84	.01					5.87
Petersburg	do		.26	.50		.20								.20		.58		.11	.24			.52		.24	.11	.20		.65	.03				3.84
Sharon	do	.02	T.	.47	T.	.46	.02							T.	.31	T.		.43	.28			2.10	T.		.01	.15	.01		1.15	.01			5.42
Valley City	Shayenne		.17	1.35		.24	.22	.02						T.	.05	.03		.05	.04				.08	.09			.47						2.81
Walperton	Red	.36		.29	.25	T.	.11							.68				T.	.50				.09	.31		.07	.11						5.45
Middle Division																																	
Ashley ³	Missouri	.27	.27	.84	.42	.15			.04					.03	.02	T.		.27	.20	.05	.05	T	T.	.92				T.	T.				3.53
Bisbee	Devils Lake	.91	.44	T.	.96	.85								.14	.05	.68		.14	.05	.68		.14	.05	.68		.14	.05	.68					7.11
Bismarck ^{1 5}	Missouri	.59	T.	.16	.67	.06								.38	T.			.10	1.83	.14		.10	.08	.46				.03	.25				4.85
Bottineau ²	Mouse	.72	T.	.35	.85	.18								.54	.20	1.23		.05	1.37	.64		.49	.03	.95			.19	2.64	1.60				12.03
Butte	do	.56	.29	.70	1.86	.89			.31					.46	1.03	T.		.39	2.69			.17	.14	T.	.10			.25	1.55	.16			11.55
Carson	Heart	.31	.27	.64	1.36	.17								.64	.03	T.		1.30	.19			.08	.22	.40	T.			.73					6.31
Center	Missouri	1.13	.10	1.3	1.00	.40								.21				.33	.77	1.24		.09	.26	.14	T.			.05	1.53				7.38
Drake ²	Mouse	.12	.13		1.30	.99	.06							.80				.06				1.32		.16		.14			.53	.27			5.90
Dunseith	do	.55		T.	.97	.33	T.							.11	T.	.58	.02	.02	.09							.75	1.50	1.48	.14		.69		7.28
Eckman	do	.23		1.18	.89	.22	T.							.73	.65	.29		.33	1.15						.54	.03	T.	1.24	2.28				10.44
Fessenden	James	.04		1.22	.24	.71								.15	T.	.61		.33	1.22			.24	T.					.46					5.22
Fort Yates	Missouri			1.20										.30				.65	.17	.85			1.15					1.17					5.49
Foxholm	Mouse	.63		.30	1.08	.29								.23	.09			.06				.35		.28		.02	1.11	3.13	.17				10.14
Garrison ³	Missouri	.13	.20	.24	1.08	.24								.21				.80	.27			.28	.03					.25	2.22				6.99
Granville	Mouse	.40		.40	1.20	.36								.40	.73			.01	.84	1.73			.36		.15	.06	.25	.81	2.31	.05			10.06
Hansboro	Devils Lake	.16		.44	.84	.62								.01	.02			.90	.01	1.26			.23		.09		1.08	2.00	.29		.07		8.02
Linton	Missouri	.78		.70	.80	.24								.30				.17	.06	.50	.12		.02		.76			1.90	T.				6.35
Madlock	Shayenne	.09	T.	.56	.15	.68								.04				.23	.24	.80			.31		.12		.31		.35				3.88
Mandan ²	Missouri	.02	.56	T.	.56	.30	T.							.33				.12	T.	.82			.04	.03	.13	.25		.38	.02				5.56
Max ²	do	.55	T.	T.	.80	.16								.43				.04	2.04	.04			1.15		.28			.95	.69				7.17
McClusky	do		.02	.40	1.16	.50								.45	.18	T.		.12				1.55	.49		T.			.58	</				

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Met'l Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

SEP 8 1944

CLIMATOLOGICAL DATA

UNIVERSITY OF ILLINOIS

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIII BISMARCK, N. D., JULY 1944 No. 7

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GENERAL SUMMARY

Temperatures averaged below normal with the highest readings in the middle nineties, only one station reporting 100° or higher. The precipitation was below normal except for the east and especially the southeast portion, where much above normal precipitation was recorded. This July was the 4th driest since 1892 in both the middle and western divisions, while in contrast the eastern division was the 10th wettest. The cool weather and above normal sunshine, combined with the copious rains in June, were favorable for maturing crops. At the close of the month the prospects were for a record production of all wheat, the second largest crop of corn, barley, and potatoes, and the third largest oats crop on record are indicated by conditions on August 1st according to the crop report of the Federal Agricultural Statistician at Fargo. The rainfall, mostly as thundershowers, was general the first week and continued through the 18th over the east portion; from this point on the moisture deficiency was felt in the middle and western portions of the state. By the close of the month oats and barley were being cut, as was some wheat and the balance was ripening rapidly. The early corn was beginning to tassel. Hailstorms were numerous, being most severe on the 2d and 17th, but the damage was small compared to 1943 from this cause, the greatest loss being in the northwestern counties and otherwise many scattered losses from hail occurred over the state. Both cattle and sheep are above average, though not as good as last year. Pastures were beginning to dry up in the central portion during the latter part of July. There is still plenty of feed in all sections of the state.—M. S. C.

TEMPERATURE

The mean temperature for the state was 67.6°, or 1.4° below the 1892-1944 average for July. The mean temperature for the eastern division was 68.2°; for the middle division, 67.6°; and for the western division, 67.0°. The highest mean temperature was 70.8° at Medora, and the lowest, 64.3° at Edmore, making a range in mean temperature of 6.5°. The absolute range was 69°, from 102° at Carrington on the 24th, to 33° at Kenmare on the 8th. The average daily excess in temperature for the state since January 1, 1944, is 1.5°.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.29	20	29.52	25	9.5	56	sw.	5	77	84	52	46	83	19
Devils Lake.....	30.28	4	29.48	25	7.5	36	sw.	5	82	87	54	53	65	38
Fargo	30.25	20	29.56	25	11.2	40	s.	2	85	86	61	57	77	24
Williston.....	30.25	20	29.45	25	6.8	30	w.	7	70	82	45	39	86	25

† And other dates.

PRECIPITATION

The average precipitation for the state was 1.74 inches, or 0.69 inch less than the 1892-1944 average for July. In the eastern division the average amount was 3.41 inches; in the middle division, 1.08 inches; and in the western division, 0.74 inch. The greatest monthly amount reported was 10.61 inches at Milnor; the least was a trace at Underwood. The greatest amount recorded in any 24 consecutive hours was 5.28 inches at Milnor on the 3d. The accumulated excess in precipitation for the state since January 1, 1944, is 1.72 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	15	11	2	8	15	1	4	..	1	6	2	..	1	..	7	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lunar halos .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Solar halos .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hail	5	..	1	1	2	..	..	..	..	1	1	..	1	..	3	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thundrsts.	3	12	6	5	22	26	22	..	6	8	5	1	10	7	1	18	24	3	1	..	3	7	..	2	17	1	1	..	5	14	15

COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	68.7	108	31	3.44	2.98	3.28	3.23	0	8	19	8	4	
1893...	69.5	112	35	2.54	1.94	1.64	2.04	0	7	17	10	4	
1894...	71.7	107	38	0.92	0.73	0.25	0.63	0	3	20	8	3	
1895...	66.1	102	29	3.12	2.44	3.13	2.90	0	8	14	11	6	
1896...	67.5	107	31	1.67	1.48	1.37	1.51	0	6	15	10	6	
1897...	68.9	109	38	6.46	4.43	2.40	4.43	0	9	13	11	7	
1898...	67.6	106	28	3.07	2.40	2.00	2.49	0	7	15	11	5	
1899...	68.3	109	32	2.37	2.30	2.35	2.34	0	6	18	9	4	
1900...	67.9	107	33	2.89	2.26	1.60	2.25	0	6	16	10	5	
1901...	70.8	110	40	5.10	4.08	3.66	4.28	0	6	18	7	6	
1902...	67.6	106	34	2.34	2.00	2.10	2.15	0	5	20	7	4	
1903...	66.7	109	26	2.59	1.77	2.32	2.23	0	7	17	8	6	
1904...	61.4	102	34	2.96	2.83	0.60	2.13	0	6	17	8	6	
1905...	65.6	100	32	4.27	3.90	3.17	3.78	0	8	17	9	5	
1906...	66.9	102	34	2.90	1.32	0.45	1.56	0	11	13	8	10	
1907...	65.8	103	31	2.69	3.90	2.60	3.06	0	9	16	11	4	
1908...	68.6	103	31	1.89	2.37	1.46	1.91	0	6	19	9	3	
1909...	67.1	99	34	3.45	2.94	1.80	2.73	0	8	15	9	7	
1910...	70.0	114	33	1.30	2.10	1.40	1.60	0	5	18	9	4	
1911...	65.1	107	23	2.25	1.76	1.10	1.70	0	6	18	10	3	
1912...	66.0	106	30	4.52	3.07	3.38	3.66	0	10	12	13	6	
1913...	65.6	103	35	2.64	2.38	1.65	2.22	0	8	17	8	6	
1914...	72.1	109	36	2.62	1.85	2.03	2.17	0	6	19	9	3	
1915...	62.3	97	30	2.42	2.66	4.30	3.13	0	11	12	11	8	
1916...	73.1	105	33	4.71	2.76	1.41	2.96	0	7	19	9	3	
1917...	70.9	114	27	1.96	1.80	0.87	1.54	0	7	17	11	3	
1918...	65.5	102	34	2.84	2.90	2.46	2.73	0	7	14	10	7	
1919...	71.2	105	37	3.15	1.11	1.32	1.86	0	5	18	10	3	
1920...	68.3	103	31	2.27	2.33	1.73	2.11	0	7	18	11	2	
1921...	71.4	110	35	4.47	2.87	1.88	3.07	0	7	17	10	4	
1922...	65.6	100	30	2.28	2.44	2.72	2.48	0	8	16	11	4	
1923...	71.2	103	35	2.90	3.34	2.91	3.05	0	8	16	11	4	
1924...	65.5	99	32	1.93	2.04	1.83	1.93	0	6	18	9	4	
1925...	66.7	106	29	1.43	1.33	1.30	1.35	0	6	18	9	4	
1926...	70.3	108	32	2.35	1.78	1.99	2.04	0	7	18	8	5	
1927...	65.4	97	28	2.33	3.11	3.09	2.84	0	9	15	10	6	
1928...	67.4	96	38	4.65	5.32	4.49	4.82	0	10	16	10	5	
1929...	70.6	109	34	1.93	1.09	0.78	1.27	0	5	21	8	2	
1930...	72.3	107	34	1.83	0.80	0.49	1.04	0	5	21	8	2	
1931...	70.6	111	37	2.89	3.20	3.01	3.03	0	8	17	8	6	
1932...	70.0	108	36	1.95	2.22	1.68	1.95	0	7	19	8	4	
1933...	71.9	109	36	2.04	2.13	1.83	2.00	0	7	19	9	3	
1934...	71.8	112	29	1.58	1.30	0.77	1.18	0	6	18	10	3	
1935...	73.8	110	45	3.90	5.44	3.90	4.41	0	10	17	11	3	
1936...	79.9	121	38	0.71	0.48	0.92	0.70	0	4	22	8	1	
1937...	71.7	111	40	3.70	2.70	2.40	2.93	0	9	15	10	6	
1938...	69.7	104	39	3.11	3.85	3.05	3.34	0	9	15	13	3	
1939...	72.6	108	37	1.57	1.82	2.04	1.81	0	7	19	9	3	
1940...	71.6	107	37	4.29	3.75	3.05	3.70	0	11	14	13	4	
1941...	70.8	106	34	1.40	1.65	2.23	1.76	0	8	15	12	4	
1942...	67.1	97	36	2.71	2.86	1.73	2.43	0	7	13	13	5	
1943...	70.5	103	41	2.88	3.14	2.13	2.72	0	8	19	9	3	
1944...	67.6	102	33	3.41	1.08	0.74	1.74	0	6	16	13	2	
Period	69.0	121	23	2.78	2.46	2.05	2.43	0	7	17	10	4	

NAT.
HIST.

Climatological Data for July 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	68.7	-0.7	102	24	42	4†	1.48	-1.13	0.40	5	0	7	20	7	4	.....	Soo Line Agent.
Cassellton	Cass	934	48	68.2	-1.7	93	2	46	8	4.26	+1.57	0.91	4†	0	10	27	3	1	s.	C. Hayford.
Cavalier	Pembina	894	34	69.2	.....	98	24	46	9†	4.53	+1.89	1.65	16	0	5	16	15	0	s.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	.....	.....	.....	.....	3.47	+0.94	1.28	16	0	7	18	8	5	se.	O. M. Jensen.
Cooperstown	Griggs	1,428	47	69.4	-0.2	97	24	41	20	1.42	-1.17	0.44	16	0	6	10	15	6	nw.	R. J. Lockner
Courtney	Stutsman	1,523	14	.....	.....	.....	.....	.....	.....	1.46	-1.16	0.51	6	0	7	17	8	6	se.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	67.8	+0.4	95	24	46	20	2.90	+0.33	1.75	16	0	9	9	16	6	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	68.0	-1.9	94	2	45	29	4.21	+1.64	1.26	11	0	11	14	14	3	s.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	20	64.3	-3.2	96	24	34	20	2.27	-0.57	1.20	6	0	7	28	2	1	w.	Mike Davis.
Ellendale	Dickey	1,457	49	68.6	-2.3	92	2	45	20	4.84	+2.19	1.38	11	0	13	20	8	3	s.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	17	69.3	+1.2	90	24	45	20	6.95	+3.52	1.75	3	0	10	10	16	5	s.	U. S. Weather Bureau.
Foran	Sargent	1,249	51	70.2	+0.1	91	31	48	8†	7.80	+4.92	2.58	4	0	10	20	10	1	s.	Helge Dyste.
Fullerton	Dickey	1,439	46	68.8	-1.4	92	2	44	20	4.48	+1.60	1.32	4	0	10	13	15	3	s.	F. O. Alin.
Gackle	Logan	1,951	14	67.6	.....	93	24	40	27	0.43	-2.25	0.25	17	0	3	20	10	1	w.	Jack Dixon.
Grafton	Walsh	827	52	69.0	+0.2	93	24	44	20	2.48	-0.28	0.69	13	0	8	13	16	2	se.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	70.0	+1.5	96	24	39	29	2.18	-0.60	1.10	7	0	6	13	15	3	s.	University of N. Dak.
Graud Forks Airt. 2½ mi. W	Grand Forks	832	4	68.2	.....	96	24	42	20	1.93	.....	1.09	7	0	8	10	18	3	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	69.3	-2.1	91	2†	45	20	4.07	+1.20	1.68	3	0	11	17	8	6	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	65.2	-1.0	92	24	41	20	3.68	+1.25	2.30	30-31	0	6	11	16	4	sw.	A. E. Prior.
Hillsboro	Trall	901	44	68.6	-2.1	92	24	45	20	2.92	+0.28	0.76	22	0	9	11	16	4	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	52	70.4	+0.8	98	24	43	20	1.93	-0.77	0.77	6	0	10	10	18	3	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	4	67.6	.....	96	24	42	20	2.26	.....	1.25	5-6	0	9	12	17	2	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	67.4	.....	98	24	39	20	1.36	.....	0.65	5	0	7	13	17	1	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	66.4	+0.1	95	24	39	20	1.57	-0.93	0.70	6	0	8	16	14	1	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	67.5	-0.6	96	24	39	20	3.38	-2.56	0.18	16	0	3	11	12	8	u.	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	68.4	-2.0	92	2	47	20	5.81	+2.91	2.05	11	0	12	17	5	9	nw.	J. O. Halverson.
Mayville	Trall	975	48	68.4	-1.8	96	24	43	19	1.31	-1.40	0.50	11	0	4	14	16	1	s.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	66.2	-1.9	93	24	40	20	2.70	-0.10	2.25	16	0	7	17	12	2	w.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	33	69.7	-1.7	90	2†	44	20	6.29	+3.44	1.53	3	0	11	23	5	3	nw.	J. G. Carlson.
McVille	Nelson	1,467	14	.....	.....	.....	.....	.....	.....	0.63	.....	0.45	16	0	4	15	16	0	nw.	A. M. Casad.
Minor	Sargent	1,117	5	67.9	.....	92	24	44	20	10.61	+7.82	5.28	3	0	11	23	5	3	sw.	E. W. Wilson.
Oakes	Dickey	1,318	15	67.2	-4.5	89	2	46	20	7.33	+4.48	2.55	3	0	10	15	7	9	nw.	F. H. Murray.
Park River	Walsh	998	40	67.2	-1.3	95	24†	41	20	1.84	-0.77	0.46	6	0	6	21	10	0	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	67.4	-0.4	95	24	44	12	2.81	+0.40	0.87	6	0	9	9	18	4	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	67.0	.....	96	24	39	20	0.96	-2.00	0.21	13†	0	6	15	11	5	nw.	T. M. Rykken.
Sharon	Steele	1,516	20	68.8	-2.0	98	24	41	20	1.13	-1.56	0.36	5-6	0	10	12	15	4	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,229	38	68.8	-1.3	91	2	43	20	4.69	+1.97	1.55	16	0	12	17	13	1	nw.	I. C. Robertson.
Wahpeton	Richland	962	52	70.2	-0.7	90	2	43	20	8.31	+5.36	4.34	2-3	0	12	16	12	3	nw.	W. J. Cavanaugh.
Average for Eastern Division				68.2	-1.2	102	24	84	20	3.41	+0.63	5.28	8	0	8	15	12	4	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	66.7	-3.0	92	24†	39	20	1.60	-1.06	0.54	11	0	11	6	22	3	s.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	67.3	-0.1	95	24†	42	28	1.62	-1.08	0.56	6	0	9	11	17	3	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	69.6	-0.9	94	24†	44	8	0.67	-1.61	0.53	5	0	5	16	14	1	nw.	U. S. Weather Bureau.
Bismarck Airt. 2½ mi. SE	Burleigh	1,650	5	69.4	0.0	96	24	43	20	1.01	-1.34	0.75	5	0	7	16	14	1	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	66.2	-1.4	91	24†	41	28	2.02	-0.37	1.05	6	0	8	20	6	5	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	66.7	-3.3	90	30	43	8	1.03	-1.70	0.35	17	0	4	16	15	0	nw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	32	68.5	-2.3	96	30	38	8	1.14	-0.85	0.96	5	0	3	14	15	2	nw.	J. W. Evans.
Center	Oliver	2,100	6	67.2	.....	97	22	39	20	0.10	.....	0.06	19	0	3	11	19	1	nw.	Fred L. Heinz.
Drake	McHenry	1,634	15	67.8	-3.8	96	24	46	8†	0.87	-1.43	0.28	5-6	0	8	19	9	3	s.	H. G. Krings.
Dunseith, 2 miles NNE	Rolette	1,682	48	65.4	-1.6	91	24	42	20	1.64	-1.03	0.46	6	0	11	20	10	1	w.	Hubert Downs.
Eckman	Bottineau	1,500	39	66.6	-1.4	91	24†	43	8	0.91	-1.45	0.54	2	0	4	16	15	0	nw.	E. R. Sherman.
Fessenden	Wells	1,610	32	68.0	-1.4	95	24	45	8†	1.64	-0.93	1.54	5-6	0	2	20	10	1	w.	John V. Zuber.
Fort Yates	Sioux	1,670	44	70.2	-2.5	95	22†	41	20	0.70	-1.38	0.40	10	0	2	25	9	0	nw.	F. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	23	67.4	-2.3	92	30	42	8	0.57	-1.36	0.45	2	0	4	10	15	6	nw.	E. C. Bierbaum.
Garrison	McLean	1,911	67	66.8	-2.4	95	30	41	8	1.78	-0.71	0.81	10	0	5	13	16	2	w.	Mae H. Vorachek.
Granville	McHenry	1,504	37	67.6	-1.1	93	24†	44	8	1.37	-0.90	0.95	6	0	9	24	6	1	nw.	Fred Koble.
Hansboro	Towner	1,597	36	65.4	-0.9	92	24†	43	20	1.55	-0.99	0.89	5-6	0	7	20	11	0	nw.	W. E. Disher.
Harvey	Wells	1,596	41	.....	.....	.....	.....	.....	.....	0.55	-1.85	0.14	25	0	6	18	10	3	w.	Orville Hoksche.
Leeds	Benson	1,515	4	68.0	.....	97	24†	43	20	1.61	.....	0.96	10	0	4	12	18	1	w.	John Dalmage.
Linton	Emmons	1,711	27	69.7	-3.0	96	30	41	20	2.76	+0.63	1.20	5-6	0	9	13	15	3	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,694	29	67.8	-1.1	97	24†	40	20	0.68	-2.01	0.30	5-6	0	5	11	19	1	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	30	68.6	-3.3	96	30	43	8	0.67	-1.64	0.48	6	0	7	18	8	5	sw.	No. Gt. Plains Field Sta.
Max	McLean	2,093	15	66.9	-4.5	95	30													

Climatological Data for July 1944—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours †	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division																				
Epping	Williams	2,224	33	67.7	-3.1	95	29	37	9	1.30	-0.75	0.70	2	0	6	20	10	1	nw.	T. Beachler.
Fairfield, 9½ miles N	Billings	2,650	7							0.65	-1.63	0.29	7	0	3	24	6	1	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	25	66.5		94	30	38	8	0.43	-1.79	0.19	30	0	4	15	15	1	sw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	64.4	-5.5	94	30	36	8	0.18	-1.62	0.07	3	0	6	15	14	2	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35																	John S. Sorenson.
Halliday	Dunn	2,073	3							1.60		0.97	5	0	4	22	9	0	nw.	John Kisse.
Hettinger	Adams	2,675	36	67.0	-4.7	93	30†	40	8	1.94	-0.34	1.61	5	0	3	24	6	1	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	66.6	-2.7	94	24	33	8	0.56	-1.74	0.40	2	0	4	25	4	2	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	67.8	-3.4	95	30	42	8	1.49	-0.42	0.64	6	0	5	13	14	4	nw.	S. P. Grane.
Medora	Billings	2,271	28	70.8		97	29†	44	9†	0.18	-1.71	0.10	5	0	2	28	3	0	w.	Harry Roberts.
Mott	Hettinger	2,424	36	67.5	-4.1	96	30	39	8	0.45	-1.68	0.24	5	0	6	25	4	2	nw.	P. G. Wick.
New England	Hettinger	2,621	49	67.5	-3.0	98	29	39	7	0.27	-1.86	0.17	31	0	2	16	15	0	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		3	66.2		88	24†	40	8	1.15		0.84	5	0	6	24	7	0	w.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	66.8	-2.8	97	30	37	8	0.18	-2.04	0.06	19	0	4	13	18	0	sw.	C. E. Shubert.
Portal	Burke	1,954	38	65.8	-2.2	93	24	38	8	0.39	-1.68	0.25	17	0	7	16	10	5	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	66.8	-4.3	96	30	37	7	1.52	-0.75	0.76	3	0	3	14	17	0	w.	Geo. B. Gee.
Richardton, 1½ miles N	Stark	2,467	27	66.6	-4.5	95	30	41	8	0.04	-2.42	0.03	11	0	2	12	18	1	se.	Assumption Abbey.
Ryder	Ward	2,108	15							0.29	-1.94	0.15	5	0	3	22	9	0	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	65.2	-5.5	94	24†	38	8	0.22	-1.80	0.08	7	0	5	12	19	0	nw.	H. J. Bugge.
Stanley	Mountrail	2,258	6	65.6		96	24	37	8	0.53		0.23	1	0	4	12	18	1	w.	Leroy Edwards.
Tagus	Mountrail	2,179	15							0.19	-1.86	0.14	2	0	2	18	13	0	nw.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15																	H. Francis Cannon.
Trotters	Golden Valley		18							1.29	-0.47	0.71	31	0	7	11	20	0	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	67.0		97	30	36	8	0.23		0.08	6†	0	3	12	16	3	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	68.5	-2.6	95	24†	37	8	0.86	-1.14	0.62	21	0	5	20	10	1	w.	J. C. Zeller.
Willrose	Williams	2,258	16							0.85	-1.13	0.40	5	0	7	26	4	1	w.	Jonathan Winkler.
Williston	Williams	1,878	64	68.6	-0.3	95	24	43	8	1.73	-0.16	1.19	2	0	7	13	14	4	se.	U. S. Weather Bureau.
Average for Western Division																				nw.
Average for the State																				nw.
				67.6	-1.4	102	24	38	8	1.74	-0.69	5.28	3	0	6	16	13	2	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

*, b, etc. Number of days missing, for example, * indicates two days missing.

Daily Temperatures for July 1944

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum...	86	90	70	65	82	81	80	68	74	80	71	81	83	78	80	82	84	77	70	74	85	91	82	92	89	80	72	87	83	92	89	80.6
	Minimum...	61	58	52	49	62	57	52	45	51	49	54	48	55	57	45	55	53	56	49	39	50	61	57	60	62	53	46	42	43	58	57	52.8
Bismarck Airport	Maximum...	91	84	72	74	86	84	75	70	75	77	76	85	85	78	84	88	89	81	75	78	89	93	87	96	90	82	75	89	90	96	88	83.3
	Minimum...	61	60	58	52	61	60	52	46	56	57	59	52	61	57	50	58	55	55	52	43	52	62	58	59	59	53	50	48	50	63	64	55.6
Bottineau	Maximum...	88	82	76	75	80	81	72	74	75	73	75	80	81	69	79	85	81	76	71	75	83	81	84	91	78	73	67	76	85	91	78	78.5
	Minimum...	64	69	51	49	54	60	59	45	56	62	61	50	58	54	47	47	53	50	53	43	53	59	53	55	64	49	44	41	50	56	60	53.8
Carson	Maximum...	89	80	76	75	85	85	80	70	76	80	78	83	84	83	84	87	83	81	79	80	89	88	88	93	86	81	76	93	89	96	92	83.5
	Minimum...	62	65	53	50	55	55	56	38	47	53	56	51	56	57	47	58	51	48	51	47	52	56	50	59	59	50	51	43	53	59	64	53.5
Crosby	Maximum...	89	71	72	70	80	82	69	73	76	74	76	87	81	69	84	86	82	79	73	79	91	81	86	96	78	76	75	82	89	85	75	79.5
	Minimum...	62	61	46	48	57	54	52	43	49	47	49	49	56	52	46	51	53	52	50	46	46	55	53	54	60	51	46	49	54	57	60	61.9
Devils Lake	Maximum...	84	86	72	77	80	81	74	67	75	75	76	80	87	74	77	88	81	76	70	75	83	91	80	95	88	76	64	75	83	93	85	79.6
	Minimum...	65	59	54	60	60	60	52	49	50	55	57	50	63	55	51	56	57	56	52	46	54	65	60	57	62	54	50	46	50	63	66	55.9
Dickinson Airport	Maximum...	89	75	69	77	80	84	70	68	78	78	75	82	81	75	82	88	88	78	75	78	88	85	86	92	80	78	74	88	92	95	81	80.9
	Minimum...	64	58	54	60	58	55	41	39	47	53	56	53	58	54	48	56	54	48	53	48	54	58	52	61	57	53	50	54	58	60	61	53.7
Dunn Center	Maximum...	87	75	67	76	79	82	69	68	75	72	75	81	81	79	80	85	87	79	73	79	89	83	83	93	78	78	74	85	92	96	78	79.9
	Minimum...	67	62	53	47	53	55	55	37	41	49	52	48	49	48	46	48	49	46	49	40	40	54	51	52	55	50	50	49	49	53	63	50.0
Fargo Airport	Maximum...	85	90	66	68	81	85	84	68	75	81	75	78	85	87	80	86	84	79	72	76	83	84	82	90	87	82	67	78	84	86	82	80.3
	Minimum...	68	63	59	58	65	62	60	50	56	61	60	55	62	61	55	58	58	62	52	45	54	59	61	57	66	59	55	51	49	57	70	58.3
Fessenden	Maximum...	85	84	75	75	82	82	81	69	74	75	74	83	86	85	81	87	84	83	74	77	88	92	85	95	89	75	69	78	85	94	87	81.7
	Minimum...	62	65	52	49	62	60	58	45	48	57	49	49	56	56	49	54	55	52	45	51	62	57	57	62	52	49	45	45	50	60	61	54.2
Fullerton	Maximum...	87	92	72	67	86	84	83	72	77	81	76	82	86	80	83	85	83	76	69	78	87	89	80	88	85	80	70	81	80	89	90	81.2
	Minimum...	64	67	57	55	64	62	65	47	50	60	57	51	55	64	51	56	56	59	53	44	50	60	60	57	65	54	53	48	47	56	60	56.5
Garrison	Maximum...	88	82	73	70	82	84	71	70	75	74	77	84	84	75	82	84	86	79	74	78	82	86	84	94	79	77	74	83	88	95	81	80.7
	Minimum...	61	55	53	51	60	59	48	41	47	55	56	50	56	50	48	52	54	52	51	43	49	56	55	58	57	51	49	46	51	60	62	52.8
Golva	Maximum...	93	77	66	75	81	80	66	65	78	70	76	83	79	73	83	84	87	79	78	80	88	82	87	92	78	79	77	88	93	94	82	80.4
	Minimum...	63	51	47	49	54	39	36	40	49	50	46	50	47	41	48	47	42	46	39	50	51	47	52	52	50	46	45	49	55	59	48.4	
Grafton	Maximum...	83	88	89	75	78	85	83	75	77	79	78	78	87	82	80	88	88	88	85	85	91	89	93	92	80	77	74	81	91	90	83.4	
	Minimum...	64	62	55	50	59	62	56	50	45	54	57	48	58	47	54	53	54	59	54	44	50	59	61	52	62	55	50	52	49	54	63	54.6
Grand Forks Airport	Maximum...	83	88	73	71	82	84	85	67	75	78	76	80	86	86	80	88	84	79	72	77	84	89	82	96	87	80	66	75	83	90	86	81.8
	Minimum...	65	65	56	50	61	62	55	49	50	59	58	50	60	57	54	55	57	57	47	42	51	61	56	53	67	56	49	50	44	55	64	55.0
Jamestown Airport	Maximum...	86	91	73	65	82	84	81	70	73	83	77	82	85	80	82	86	85	80	70	76	83	93	84	96	87	81	80	82	91	90	81.5	
	Minimum...	65	59	51	50	62	61	52	45	50	59	55	49	53	59	50	51	52	57	48	42	48	60	57	52	59	53	51	48	46	56	62	53.6
Kenmare	Maximum...	88	72	76	74	82	85	70	74	71	73	79	84	83	71	83	87	84	79	72	87	87	84	84	94	78	77	74	82	88	93	70	79.9
	Minimum...	65	61	44	46	49	48	48	33	38	42	50	52	61	53	51	59	56	55	55	49	56	62	55	61	64	55	48	52	58	64	60	53.2
Langdon	Maximum...	82	86	74	77	80	81	77	70	75	78	77	79	77	80	77	87	85	78	78	77	80	92	83	95	90	76	68	85	85	92	87	80.9
	Minimum...	63	61	47	47	50	59	56	47	45	50	51	40	58	52	49	53	55	55	47	39	47	62	57	54	63	48	46	45	44	62	60	52.0
Marmarth	Maximum...	89	83	67	77	82	81	78	66	78	73	75	82	81	77	82	86	88	80	83	80	84	86	92	87	79	76	90	90	95	84	82.0	
	Minimum...	70	63	65	51	60	54	56	42	45	53	50	49	58	54	44	51	59	54	46	47	53	54	49	50	63	53	53	46	53	57	60	53.6
Minot Airport	Maximum...	89	81	72	75	81	84	70	70	75	73	78	84	83	76	81	85	83	78	72	78	87	88	84	94	78	77	71	77	88	93	76	80.0
	Minimum...	62	56	55	55	58	61	47	43	50	55	53	52	64	56	51	59	56	56	55	49	56	62	58	63	60	53	49	50	57	61	61	55.5
Mott	Maximum...	90	82	70	76	81	84	72	68	77	75	75	82	84	75	83	85	88	80	75	80	89	88	87	92	86	84	76	93	90	96	86	82.2
	Minimum...	63	62	55	50	59	52	57	39	47	53	57	50	57	53	45	57	49	47	49	40	53	52	50	55	67	48	50	48	50	58	65	52.8
Pembina Airport	Maximum...	85	86	75	81	79	81	78	69	78	75	78	78	88	82	80	90	84	74	72	77	85	91	79	95	78	65	69	85	92	89	80.9	
	Minimum...	66	62	52	50	55	61	55	48	46	54	53	44	59	54	53	52	54	55	49	46	49	57	58	50	66	56	50	52	48	56	61	53.9
Sharon	Maximum...	82	90	79	69	80	85	83	71	77	85	79	81	87	85	82	89	88	80	73	80	85	92	87	98	90	82	71	81	89	89	83.2	
	Minimum...	61	62	54	52	61	61	58	45	46	56	60	50	57	60	49	55	53	54	53	41	51	61	59	54	67	56	48	43	45	61	62	54.5
Steele	Maximum...	85	85	72	71	81	83	78	67	76	76	73	83	84	80	80	87	86	78	80	76	88	92	85	83	87	78	72	82	83	94	91	81.5
	Minimum...	57	62	51	49	58	59	53	39	49	52	55	46	54	56	43	52	50	51	54	39	48	60	54	62	47	48	41	45	55	58	51.6	
Valley City	Maximum...	85	91	75	70	80	83	83	74	73	80	78	78	83	79	83	83	83	78	75	74	81	88	88	90	89	86	77	76	80	88	88	81.4
	Minimum...	65	65	60	51	61	61	56	46	54	62	60	51	57	62	52	53	57	60	55	43	50	61	60	55	67	56	56	48	46	55	59	56.3
Wahpeton	Maximum...	86	90	88	70	85	85	85	79	73	81	79	77	85	84	8																	

Daily Precipitation for July 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James						.40					.39						.03	.06		.11												1.48		
Casselton	Red		.34	.91	.10		.91				.25	.75			.20			.44	.50							.25							4.26		
Cooperstown	Sheyenne		T.				.38	.36			.05	.11						.27			T.			.08									1.42		
Courtenay	James			.02			.51	.10			.07						.44	T.		.07						.42							1.46		
Devils Lake ^{1 5}	Devils Lake		.02			.50	.04	.14			.24			.05	T.		1.75	T.		.01													2.90		
Edgeley	James			.45	.07	.39	.59				1.26	.11		.10	.02	.01	1.19				.11					.02							4.21		
Edmore	Devils Lake					1.20	.20				.45	.11		.08	.02		.21																2.27		
Ellendale	James			.35	1.09	.36	.31	.64			.13	.02	1.38			.02	.20		.22	.08				.04									4.84		
Fargo ^{1 5}	Red	T.	.80	.95	1.24	.12	.77	T.			1.59	.40			.03		.71	T.	.11	.25						.34							6.95		
Forman	Sheyenne		2.37	2.58	.59	.17	.21			.20	1.29	.03			.03		T.	T.	.68	.16			.05										7.80		
Fullerton	James		.79	1.32		.36	.14				.08	.87	T.		.03		T.	T.	.68	.16			.05										4.48		
Gackle	do											.10					.08		.25														0.43		
Grafton	Red					T.	.28	.25			.37	T.					.69		.08		.62	.03											2.48		
Grand Forks Airport ³	do		.02			T.	.13	.09	T.		T.						.52				.02		.08				.01						0.66		
Hankinson ²	do		1.68	.06	.71	.05	T.	.28	.13		T.	.11	.33									.22											1.93		
Hannah	Pembina		.10			1.20	T.				T.								.48		.05												3.68		
Hillsboro	Red		.02	.10	.10	.71	.25	T.			.17	.28				.01		.53			.07				.76								2.92		
Jamestown Airport ³	James			T.	.90	.36	.29				T.	.03					.06	.10		.09						.44							2.26		
Langdon	Pembina					.70	.09				.02				.02				.03		.09												1.57		
Larimore	Red					.12			.08									.18															0.38		
Lisbon	Sheyenne		.55	.04	1.15	.37				.02	2.05	.10		.03			1.08	.27		.10			.05										5.81		
Mayville	Red					.33	T.				.50						.25																1.31		
McHenry	James					.18	.05				.02						2.25		.10			.06											2.70		
McLeod	Sheyenne		1.53	.56	.68	.34			.06	.76	.63						.70	.07	.73														6.29		
Oakes ²	James		2.55		1.67	.47		.14	.06	T.	.66	.18	.06					1.32			.22												7.33		
Park River	Red					T.	.46	T.			.20	.11			.45			.26															1.84		
Pembina Airport ³	do		.12			T.	.87	.01	.03		.01	T.	.77																				2.81		
Petersburg	do					.12	.19				.06							.17		.06	.01												0.96		
Sharon	do		.01			.36	.20				.11	.04					.07	.26	.06	.01													1.13		
Valley City	Sheyenne		T.	1.17	.12	.83	.35				.12				.35	1.55	T.	.11	.02			.01	.05										4.69		
Wahpeton	Red		4.34	.29	1.26	.29		.10	.03		.77				.22			.48	.01	T.													8.31		
Middle Division																																			
Ashley ³	Missouri			T.	.17	.01	.24	.07	.03	.06	.01	.54			T.		.32	T.		.01				T.			.14						T.	1.60	
Bisbee	Devils Lake					.56	.06				.31	.17				.05		.07		.09							.03						T.	1.62	
Bismarck ^{1 5}	Missouri		.13		.75	T.	.02				.02	T.				.04			.01		.04													1.01	
Bottineau ²	Mouse		.09		.01	1.05	T.				.63				T.		.04	.01			T.													2.02	
Butte	do		T.			.31	.27				.10									T.	.35													1.03	
Carson	Heart		.08			.96						.10																						1.14	
Center	Missouri		.02			.02															.06													0.10	
Drake ²	Mouse					.28	.03	.12			.06		T.					.09	.15		.09												0.87		
Dunseith	do		.40			.46	.01				.12	.02							.11	.05			.09										1.64		
Eckman	do		.54			.26			.04		.07																							0.91	
Fessenden	James					1.54											T.	T.		.10													1.64		
Fort Yates	Missouri					.30					.40																							0.70	
Foxholm	Mouse		.45			T.					.08																							0.57	
Garrison ³	Missouri				.23		.27				.81							.33																1.78	
Granville	Mouse					.95	.06				.02	.09						.04	.07	.06													.04	1.37	
Hansboro	Devils Lake		.07			.81	.08				.08	.02																						.47	1.55
Linton	Missouri					1.20	T.		.05	.47	.37			.08				.09	.02	.13														.35	2.76
Maddock	Sheyenne					.30	.16				T.						.09	.08																0.68	
Mandan ²	Missouri		.04	T.		.48					.05								.02	.01	.04													0.67	
Max ²	do					.46	T.	.06			.03		.10						.03	.04														0.72	
McClusky	do					.24		.08										.19																0.51	
Minot Airport ³	Mouse		T.			.90	T.	.01				T.						.30				T.	T.										.09	1.30	
Mohall	do		.60			T.				.12																								T.	0.86
Napoleon ²	Missouri					.53	.05			.14	.35						.05			.03														.16	1.52
New Salem	Heart					.57														.07														0.64	
Pattibone	James					.93	.22													.77	.04					</									

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Platt Hist

THE HISTORY

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU OCT 10 1944

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIII BISMARCK, N. D., AUGUST 1944 No. 8

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

The month was cool and wet. Temperatures were below normal in all sections with the greatest departures in the western portion. The outstanding feature of this month's weather was the excessive rains which were experienced in the eastern and middle sections from the 25th to the close of the month. Many stations had their wettest month on record for any month, namely: Grand Forks Airport with 12.73 inches, is nearly twice as much as any previous August in the past 53 years; Sharon with 10.14 inches, is almost twice the amount for any month in the past 20 years; Valley City with 9.99 inches, has not been equalled in any month for the past 38 years; Mayville with 10.23 inches and Casselton with 8.70 inches, have not been equalled in any month in the past 48 years; Courtenay, Edmore, and Kensal exceeded any previous month's records. The 24 hour amount of 5.12 inches on the 29-30th was the all time record for this period at Grand Forks. This amount has been equalled or exceeded only four times in the state, at Ellendale, Fullerton, Maddock, and McHenry where more than 5 inches fell in a 24 hour period. Sunshine generally was below normal and especially so over the rainy northeastern portion. By the close of the month there was a great deal of speculation as to the damage that had been done to the crop by the wet weather. It has been conservatively estimated that there has been a 10 percent loss caused by the weather. A good deal of the combining had to be delayed with a deterioration in the grade of spring wheat; this was also true of shocked grain. Conditions were excellent for corn which promises to be a large crop. Potatoes in the upper Red River Valley were damaged, some fields standing in water for several days. On the other hand the rains were very beneficial to pastures and late garden truck. Feed is plentiful and livestock are excellent. The storm that struck Grand Forks, in a series of severe thundershowers, on the 29-30th did considerable material damage to the pavement and the flooding of numerous basements; no estimate of the loss is available. The storm which struck Bismarck early the evening of the 8th caused considerable wind damage. The wind reached an extreme velocity of 72 miles per hour. Several large roofs from warehouses were blown off and a number of plate glass windows, hundreds of large trees, and many awnings and signs were destroyed. The telephone, telegraph, and power companies had a great deal of repair work as a result of the wires having blown down. The material loss was estimated at \$10,000. The storm was very local in character, so no extensive damage resulted to farm property or crops in the Bismarck vicinity.—M. S. C.

TEMPERATURE

The mean temperature for the state was 65.6°, or 0.9° below the 1892-1944 average for August. The mean temperature for the eastern division was 66.4°; for the middle division, 65.5°; and for the western division, 64.8°. The highest mean temperature was 69.5° at McLeod, and the lowest, 61.8° at Bowbells, making a range in the mean temperature of 7.7°. The absolute range was 69°, from 103° at Fort Yates on the 9th, to 34° at Towner on the 23d. The average daily excess in temperature for the state since January 1, 1944, is 1.2°.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.32	23	29.49	9	10.1	60	s.	8	79	86	57	54	67	59
Devils Lake...	30.34	23	29.47	9	7.8	26	ne.	8	83	89	58	55	45	75
Fargo	30.28	23	29.37	31	12.0	39	nw.	31	86	89	61	63	65	62
Williston	30.27	23	29.53	9	6.9	35	w.	9	73	86	52	47	69	60

† And other dates.

PRECIPITATION

The average precipitation for the state was 4.37 inches, or 2.28 inches more than the 1892-1944 average for August. In the eastern division the average amount was 7.06 inches; in the middle division, 3.64 inches; and in the western division, 2.42 inches. The greatest monthly amount reported was 12.73 inches at Grand Forks Airport; the least, 0.99 inch at McClusky. The greatest amount recorded in any 24 consecutive hours was 5.12 inches at Grand Forks Airport on the 29-30th. The accumulated excess in precipitation for the state since January 1, 1944, is 4.01 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	29	1	1	6	8	...	8	...	1	...	...	1	5	1	9	...	...	...	...	...	...	13	...	7	5	2	5	3	8	4	
Lunar halos	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Solar halos	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hail	3	1	5	1	...	...	3	6	5	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	...	...
Thunderstms.	14	30	35	18	1	1	28	25	22	6	...	...	2	5	10	6	...	5	15	2	4	7	...	2	14	2	7	7	18	5	1

COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	67.3	105	24	2.86	2.80	1.50	2.39	0	8	15	10	6	
1893...	66.7	109	29	2.10	1.25	0.58	1.31	0	3	20	7	4	
1894...	68.8	102	30	1.37	0.86	1.20	1.14	0	4	17	10	4	
1895...	64.5	104	24	1.87	1.36	1.48	1.57	0	5	17	11	3	
1896...	64.7	107	21	2.07	0.86	0.42	1.12	0	5	17	10	4	
1897...	64.1	106	29	1.28	1.13	1.13	1.18	0	5	15	10	6	
1898...	65.4	104	24	2.92	1.40	0.75	1.69	0	5	15	11	5	
1899...	65.2	97	32	2.90	2.90	2.69	2.83	0	5	15	11	5	
1900...	70.4	114	33	6.05	4.53	4.60	5.06	0	10	14	11	6	
1901...	66.9	100	32	2.55	1.90	0.86	1.77	0	6	18	8	5	
1902...	64.3	96	26	2.65	2.36	1.88	2.30	0	8	16	9	6	
1903...	63.7	103	35	4.72	4.65	4.67	4.68	0	10	13	7	11	
1904...	63.3	102	31	1.56	1.92	1.31	1.61	0	6	17	7	7	
1905...	67.5	107	34	3.51	2.44	1.34	2.43	0	7	17	8	6	
1906...	66.3	105	31	1.53	1.74	2.25	1.84	0	7	17	6	8	
1907...	64.5	104	26	2.17	1.23	1.79	1.73	0	6	18	9	4	
1908...	63.2	104	25	2.48	2.46	1.55	2.16	0	7	17	8	6	
1909...	69.8	109	27	2.98	1.94	1.78	2.23	0	6	18	9	4	
1910...	63.1	109	24	1.58	1.30	1.51	1.46	0	5	14	8	9	
1911...	62.2	98	23	3.61	3.87	2.15	3.21	0	8	12	11	8	
1912...	63.4	118	32	3.41	2.60	2.62	2.88	0	10	11	10	10	
1913...	68.9	106	30	3.15	2.32	2.42	2.63	0	6	16	10	5	
1914...	64.2	101	26	2.00	2.26	2.61	2.29	0	7	13	11	7	
1915...	64.4	100	19	1.16	1.49	0.89	1.18	0	4	19	8	4	
1916...	66.0	100	26	3.17	2.79	2.05	2.67	0	8	16	10	5	
1917...	65.2	105	25	0.96	0.74	0.76	0.82	0	4	17	10	4	
1918...	66.5	102	34	3.51	3.39	3.25	3.38	0	8	15	11	5	
1919...	67.9	101	30	2.58	1.57	0.63	1.59	0	5	18	10	3	
1920...	68.8	108	28	1.03	2.01	1.55	1.53	0	5	22	6	3	
1921...	67.2	108	31	3.08	1.86	0.99	1.98	0	6	18	10	3	
1922...	69.8	115	33	1.29	1.63	1.02	1.31	0	6	18	9	4	
1923...	63.0	97	28	2.38	1.70	1.45	1.84	0	8	14	12	5	
1924...	63.8	102	28	2.27	1.36	1.09	1.57	0	6	17	9	5	
1925...	67.9	110	29	1.39	1.06	0.66	1.04	0	5	20	8	3	
1926...	65.6	105	36	3.01	2.41	1.68	2.37	0	7	14	8	9	
1927...	63.4	96	28	3.17	3.63	2.58	3.13	0	8	18	8	5	
1928...	64.8	105	25	3.84	3.15	2.28	3.09	0	8	17	9	5	
1929...	68.5	106	26	0.87	0.83	0.60	0.77	0	4	20	9	2	
1930...	70.4	104	32	1.40	1.45	1.49	1.45	0	6	15	9	7	
1931...	67.0	105	30	2.43	2.33	1.51	2.09	0	6	16	9	6	
1932...	68.3	100	28	2.40	1.37	1.89	1.89	0	7	16	10	5	
1933...	68.5	104	31	0.81	0.64	0.79	0.75	0	5	17	9	5	
1934...	67.4	108	25	1.70	1.15	0.60	1.15	0	5	16	11	4	
1935...	66.2	109	26	3.83	1.90	1.32	2.35	0	8	16	9	6	
1936...	69.8	110	29	1.67	1.37	1.16	1.40	0	6	14	11	6	
1937...	72.9	109	40	2.56	1.11	0.88	1.52	0	5	18	10	3	
1938...	69.8	109	33	1.79	1.22	1.48	1.50	0	6	18	10	3	
1939...	68.6	105	32	1.94	2.37	1.98	2.10	0	7	18	9	4	
1940...	67.8	103	33	3.12	1.77	1.25	2.05	0	7	18	7	6	
1941...	68.8	111	32	3.44	2.63	2.52	2.86	0	10	11	14	6	
1942...	66.3	105	33	4.69	2.48	2.10	3.09	0	9	12	12	7	
1943...	67.7	104	31	2.60	2.52	2.71	2.61	0	9	16	10	5	
1944...	65.6	102	34	7.06	3.64	2.42	4.37	0	11	13	11	7	
Period	66.5	118	19	2.57	2.03	1.67	2.09	0	7	16	9	6	

Climatological Data for August 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	65.2	-1.9	98	9	37	23	3.51	+1.44	1.14	26	0	9	16	4	11	.....	Soo Line Agent.
Casselton	Cass	934	48	68.4	+1.3	97	9	43	23	8.70	+6.16	4.00	1-2	0	14	16	13	2	s.	C. Hayford.
Cavalier	Pembina	894	34	66.6	.....	88	19	44	22 1/2	7.11	+4.60	2.25	29-30	0	11	8	17	6	se.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	.....	.....	.....	.....	5.35	+2.87	2.25	30	0	7	13	12	6	sw.	O. M. Jensen.
Cooperstown	Griggs	1,423	47	67.6	+0.2	96	1	40	23	7.34	+4.73	2.10	25	0	10	11	11	9	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	14	.....	.....	.....	.....	.....	.....	6.79	+4.39	2.18	25	0	12	13	13	5	sw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	65.5	+0.7	89	2	42	23	6.55	+4.07	1.45	30-31	0	12	8	10	13	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	67.2	-0.5	97	9	40	23	4.97	+2.62	1.84	25	0	10	12	14	5	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	20	62.4	-2.4	87	2	35	23	8.73	+6.40	2.63	2-3	0	14	17	8	6	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	67.0	-1.7	97	9	42	23	4.90	+2.13	1.12	25	0	15	12	6	13	se.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	17	67.4	+1.3	98	9	45	23	8.52	+5.63	3.67	2-3	0	13	9	13	9	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	68.6	+0.4	96	9	43	24	3.87	+1.12	0.95	31	0	8	20	7	4	s.	Helge Dyste.
Fullerton	Dickey	1,439	46	67.5	-0.5	97	9	41	23	4.23	+1.69	2.09	25	0	10	13	9	9	nw.	F. O. Alin.
Gackle	Logan	1,951	14	66.2	.....	97	9	39	24	4.34	+1.99	1.38	25	0	5	10	11	10	s.	Jack Dixon.
Grafton	Walsh	827	52	66.6	+0.4	88	9	42	17	8.25	+5.73	1.65	30	0	12	12	16	3	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	67.6	+1.6	91	9	40	23	12.16	+9.54	3.72	30	0	16	13	8	10	n.	University of N. Dak.
Grand Forks Apt., 2 1/2 mi. W	Grand Forks	832	4	66.4	.....	93	2	39	23	12.73	.....	5.12	29-30	0	15	8	10	13	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	67.2	-3.5	97	9	43	27	4.90	+2.15	1.34	3	0	12	17	8	6	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	63.0	-1.1	85	19	38	22 1/2	7.40	+5.03	2.80	31	0	11	5	18	8	sw.	A. E. Prior.
Hillsboro	Trails	901	44	67.2	-1.0	95	2	42	23	8.83	+6.08	1.70	3	0	14	9	12	10	s.	Alfred Jahneke.
Jamestown, 2 miles SE	Stutsman	1,457	52	68.0	+1.1	100	9	39	23	5.50	+2.95	2.47	25	0	12	8	13	10	nw.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	4	66.2	.....	99	9	38	23	6.99	.....	3.59	25	0	15	11	12	8	nw.	U. S. Airway Comm. Sta.
Kenais, 7 miles SW	Stutsman	1,440	5	66.2	.....	96	9	37	23	7.68	.....	2.45	8-9	0	13	8	16	7	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	63.3	-0.4	86	19	36	22	8.07	+5.60	2.30	31	0	16	9	15	7	.....	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	66.2	+0.3	94	9	38	23	5.85	+3.14	1.97	7	0	12	12	8	11	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	66.4	-1.4	96	9	44	23	5.42	+2.52	1.30	4	0	11	16	4	11	nw.	J. O. Halverson.
Mayville	Trails	975	48	67.6	-0.3	94	2	42	23	10.23	+7.68	2.75	3	0	12	11	10	10	n.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	64.2	-1.5	93	9	36	23	6.87	+4.55	1.64	7	0	13	10	15	6	s.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	33	69.5	+1.0	96	9	43	22	5.23	+2.53	1.45	25-26	0	7	18	8	5	sw.	J. G. Carlson.
McVie	Nelson	1,467	14	.....	.....	.....	.....	.....	.....	8.85	.....	4.10	7	0	13	9	15	7	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	65.8	.....	96	9	41	23	6.72	+3.99	1.48	15	0	10	16	12	3	se.	E. W. Wilson.
Oakes	Dickey	1,318	15	65.8	-3.3	96	9	43	23	3.05	+0.38	1.45	25-26	0	6	13	6	12	nw.	F. H. Murray.
Park River	Walsh	998	40	64.2	-2.4	87	12	39	22	7.21	+4.91	1.70	29-30	0	12	21	6	4	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	64.9	+0.2	90	8	41	24	9.03	+6.74	2.53	30	0	15	6	7	18	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	65.1	.....	92	9	39	23	5.50	+3.14	1.40	30-31	0	13	10	16	5	nw.	T. N. Rykken.
Sharon	Steele	1,516	20	65.8	-2.1	92	2	46	20	10.14	+7.77	2.92	7	0	14	10	13	8	se.	Nels O. Greshheim.
Valley City	Barnes	1,229	38	66.9	-0.8	94	9	42	23	9.99	+7.71	2.70	25-26	0	14	17	7	7	sw.	L. C. Robertson.
Wahpeton	Richland	962	52	69.2	+0.5	96	9	43	23	5.95	+3.08	1.92	3	0	11	14	11	6	se.	W. J. Cavanaugh.
Average for Eastern Division				66.4	-0.6	100	9	35	23	7.06	+4.49	5.12	29-30	0	12	12	11	8	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	66.0	-1.2	98	9	40	23	3.02	+0.58	0.92	24-25	0	12	5	15	11	s.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	64.8	-0.9	88	9	37	23	4.08	+1.73	0.85	2	0	12	18	6	7	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	67.9	-0.3	99	9	43	23	3.56	+1.93	0.72	25	0	15	13	11	7	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE.	Burleigh	1,650	5	67.4	+0.7	98	9	43	23	5.05	+3.23	1.19	8	0	11	13	11	7	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	62.6	-2.3	83	6	41	20	3.53	+1.08	1.14	2	0	10	14	7	10	e.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	65.0	-2.2	87	9	38	23	2.39	+0.45	0.56	25	0	11	11	8	12	nw.	R. L. Williams.
Carson, 2 miles SW	Grant	2,500	32	67.6	-1.0	102	7	40	17	2.24	+0.58	0.50	16	0	8	15	10	6	nw.	J. W. Evans.
Center	Oliver	2,100	6	66.3	.....	97	9	39	17	2.33	.....	0.95	25	0	7	13	16	2	nw.	Fred L. Heinz.
Drake	McHenry	1,634	15	66.0	-1.6	94	9	36	23	2.47	+0.45	0.51	3	0	14	14	10	7	nw.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	48	62.4	-2.2	82	7	40	23	4.72	+2.26	1.55	2	0	12	17	8	6	nw.	Hubert Downs.
Eckman	Bottineau	1,500	39	63.6	-1.4	85	6	37	23	3.55	+1.67	1.27	25	0	8	13	12	6	se.	E. R. Sherman.
Fessenden	Wells	1,610	32	66.2	-0.5	94	9	43	21	3.48	+1.30	0.74	16	0	9	8	16	7	w.	John V. Zuber.
Fort Yates	Sioux	1,670	44	68.4	-1.3	103	9	43	17	2.30	+0.41	0.55	16	0	5	20	8	3	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,657	23	64.2	-2.4	84	6	42	17	6.21	+4.23	1.88	4	0	13	6	14	11	nw.	E. C. Bierbaum.
Garrison	McLean	1,911	67	65.4	-1.2	96	9	38	23	2.87	+0.93	1.26	25	0	12	13	5	13	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	37	65.2	-0.5	86	7	40	17	3.10	+1.23	1.09	3	0	11	17	9	5	nw.	Fred Roble.
Hansboro	Towner	1,597	36	62.6	-0.9	85	8	37	22	3.65	+1.33	0.93	29-30	0	13	17	8	6	nw.	W. E. Disher.
Harvey	Wells	1,596	41	.....	.....	.....	.....	.....	.....	3.45	+1.26	1.01	25	0	10	13	8	10	w.	Orville Hoksleh.
Leeds	Benson	1,515	4	66.2	.....	91	2	37	23	3.10	.....	0.72	3	0	10	8	16	7	w.	John Dulmage.
Linton	Emmons	1,711	27	69.0	-1.1	100	9	41	23	4.70	+2.62	1.10	16	0	10	12	8	11	nw.	Wm. Heyerman.
Mad dock, 1 mile E	Benson	1,604	29	66.4	-0.1	92	2	40	24	4.59	+2.28	1.72	29	0	9	7	15	9	se.	A. T. Feland.
Mandan, 1 1/2 miles SW	Morton	1,750	30	67.0	-1.9	97	9	39	23	3.19	+1.61	1.01	4	0	15	12	8	11	sw.	No. Gt. Plains Field. Sta.
Max	McLean																			

Climatological Data for August 1944-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours 4	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Epping	Williams	2,224	33	64.6	-2.9	87	7	42	31	3.87	+2.23	3.07	2	0	10	12	11	5	uw.	T. Beachler.
Fairfield, 9 1/4 miles N.	Billings	2,650	7							2.13	+0.55	0.63	14	0	9	14	7	10	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	64.8		89	8	41	15	2.65	+0.84	0.49	14	0	9	14	11	6	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	63.1	-4.1	90	9†	38	23	2.42	+0.82	0.79	3	0	9	15	7	9	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35																	John S. Sorenson.
Halliday	Dunn	2,073	3							3.47		1.36	3	0	9	22	6	3	nw.	John Kisse.
Hettinger	Adams	2,675	36	66.8	-2.1	96	9	40	22	1.08	-0.46	0.84	16	0	2	21	7	3	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	65.2	-0.8	88	7†	42	17	3.10	+1.19	0.94	1†	0	14	18	5	8	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	65.6	-2.6	92	9†	40	21	1.70	+0.08	0.60	22	0	9	14	8	9	nw.	S. P. Grane.
Medora	Billings	2,271	28	66.6		92	8	40	21	2.51	+0.99	1.00	3	0	8	20	8	3	w.	Harry Roberts.
Mott	Hettinger	2,424	36	66.4	-1.6	99	8†	40	22	1.51	-0.25	0.52	16	0	7	21	4	6	nw.	P. G. Wick.
New England	Hettinger	2,621	49	67.0	-0.8	95	7†	40	16†	1.89	+0.31	0.77	22	0	5	14	13	4	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		3	64.4		88	8	41	17†	2.91		1.23	3	0	9	15	11	5	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	64.4	-1.6	91	9	35	23	2.78	+0.94	0.97	25	0	11	8	20	3	nw.	C. E. Shubert.
Portal	Burke	1,954	38	63.3	-1.5	86	7	42	17†	3.60	+1.64	0.78	2	0	14	12	10	9	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	64.4	-1.4	90	7	40	22	1.90	+0.22	0.69	1	0	7	15	12	4	sw.	Geo. B. Gee.
Richardton, 1 1/2 miles N.	Stark	2,467	27	65.4	-3.1	92	9	44	23	1.52	-0.32	0.33	16	0	10	14	10	7	nw.	Assumption Abbey.
Ryder	Ward	2,108	15							3.58	+1.51									S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	62.8	-4.8	89	7	36	23	1.75	+0.15	0.42	15	0	11	1	26	4		H. J. Bugge.
Stanley	Mountrail	2,258	6	62.6						4.96										Leroy Edwards.
Tagus	Mountrail	2,179	15							2.49	+0.71	0.87	1	0	7	17	12	2	nw.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15																	H. Francis Cannon.
Trotters	Golden Valley		18							1.71	+0.17	0.86	14-15	0	8	9	18	4	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	65.0		92	7	37	23	2.30		0.80	3	0	9	12	15	4	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	66.0	-2.3	92	7	40	23	1.28	-0.32	0.47	14	0	10	15	11	5	w.	J. C. Zeller.
Wildrose	Williams	2,258	16							1.91	+0.10	0.76	3	0	12	22	6	3	w.	Jonathan Winkler.
Williston	Williams	1,878	64	65.6	-0.5	90	7	44	17	2.35	+0.88	1.56	1-2	0	12	10	13	8	se.	U. S. Weather Bureau.
Average for Western Division				64.8	-2.3	99	8†	35	23	2.42	+0.75	2.15	2	0	10	14	11	6	nw.	
Average for the State				65.6	-0.9	103	9	34	23	4.37	+2.28	5.12	29-30	0	11	13	11	7	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
† And other dates.
⁴ Best available used for stations not equipped with recorders.

Daily Temperatures for August 1944

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum..	90	85	83	80	80	85	93	91	98	90	80	92	80	69	69	72	71	82	87	77	82	72	71	72	63	73	76	81	75	65	69	79.1	
	Minimum..	55	63	59	55	51	52	66	62	71	62	52	50	46	49	47	46	50	54	48	45	46	40	47	58	55	51	48	59	52	46	52.8		
Bismarck Airport	Maximum..	89	91	87	76	82	90	92	94	98	87	81	91	76	67	69	72	74	90	87	76	81	67	72	71	67	79	79	84	66	61	70	79.5	
	Minimum..	63	66	62	59	50	58	70	63	66	61	58	54	56	54	53	52	43	55	50	45	48	43	51	59	51	56	50	58	54	48	55.2		
Bottineau	Maximum..	75	80	80	71	79	83	83	83	82	79	71	81	72	65	71	67	70	77	80	75	74	69	73	75	64	73	74	81	65	63	65	74.2	
	Minimum..	57	60	57	57	53	55	61	58	64	50	50	48	50	48	50	50	42	49	61	41	44	41	44	46	56	49	47	44	58	48	45	51.1	
Carson	Maximum..	92	91	85	78	84	90	102	100	100	90	82	93	81	70	72	72	75	92	86	78	83	68	74	74	75	81	84	81	70	64	74	82.0	
	Minimum..	64	62	59	53	49	58	68	63	69	56	53	55	50	42	50	51	40	54	58	50	41	52	50	52	50	47	53	48	55	50	45	53.1	
Crosby	Maximum..	77	80	78	74	81	85	87	80	85	77	75	78	69	63	71	69	73	82	75	77	78	71	76	73	78	77	79	85	59	66	71	75.8	
	Minimum..	52	55	55	57	50	55	57	56	57	53	51	51	55	50	49	49	40	46	56	46	45	41	41	45	55	52	46	52	48	45	50.4		
Devils Lake	Maximum..	86	89	79	73	79	84	86	83	85	84	74	87	72	65	71	69	71	75	86	77	81	70	73	76	68	76	79	80	66	61	55	76.1	
	Minimum..	64	64	61	60	53	57	66	63	65	61	58	55	57	52	53	50	46	48	57	50	49	45	42	46	58	58	55	53	58	49	54.9		
Dickinson Airport	Maximum..	81	85	81	73	82	89	91	89	91	89	79	90	71	58	69	69	73	88	79	72	79	65	72	70	79	78	81	85	68	61	72	77.7	
	Minimum..	60	61	57	53	50	56	61	59	61	53	53	58	51	49	50	49	44	54	56	52	47	49	42	54	55	50	55	52	55	50	44	52.9	
Dunn Center	Maximum..	79	85	78	71	82	88	90	84	89	85	78	90	68	55	66	70	74	86	77	64	82	69	75	70	73	79	80	86	70	60	71	76.7	
	Minimum..	55	59	60	53	46	46	55	55	57	52	50	48	48	41	47	47	39	40	50	49	37	39	38	39	55	46	47	43	44	50	42	48.0	
Fargo Airport	Maximum..	90	91	85	82	81	83	82	85	98	88	79	92	78	71	67	70	76	87	81	83	71	72	74	73	61	71	81	80	68	55	78.3		
	Minimum..	64	65	63	64	60	62	67	67	68	68	59	52	58	57	55	48	50	49	62	50	51	54	45	45	56	54	52	52	57	52	50	56.6	
Fessenden	Maximum..	87	89	88	75	77	84	91	86	94	86	76	92	84	70	65	74	82	83	76	80	70	72	75	65	73	80	81	66	66	65	78.1		
	Minimum..	63	65	61	59	51	58	63	61	63	56	59	58	55	53	52	50	44	48	61	49	43	50	43	44	56	54	56	52	55	51	48	54.2	
Fullerton	Maximum..	87	88	88	82	82	84	92	93	97	93	84	94	84	75	70	67	70	82	87	80	82	72	71	77	70	65	72	79	78	68	60	79.8	
	Minimum..	58	58	64	56	55	54	67	63	75	67	57	50	55	50	55	47	46	49	64	51	50	54	41	45	60	55	49	51	60	54	51	55.2	
Garrison	Maximum..	84	83	79	77	81	87	92	86	96	85	79	90	71	59	71	69	73	86	83	73	83	71	76	71	66	79	79	83	73	68	71	78.2	
	Minimum..	60	62	60	56	50	54	62	61	63	55	55	49	57	52	50	51	41	50	54	47	45	48	38	49	56	49	53	48	53	52	46	52.5	
Golva	Maximum..	81	84	75	75	83	89	89	87	90	85	86	90	71	56	68	69	77	90	77	72	81	67	72	71	77	80	83	89	65	64	74	78.0	
	Minimum..	58	57	53	50	43	53	55	51	53	46	51	49	48	47	48	45	39	51	50	45	43	45	38	55	50	46	44	44	50	45	41	48.2	
Grafton	Maximum..	86	84	84	79	79	84	84	83	88	87	85	84	82	74	73	72	72	76	88	88	79	78	74	76	75	70	78	80	79	74	55	79.0	
	Minimum..	61	63	63	60	54	53	64	59	63	60	58	53	61	52	53	50	42	45	63	51	49	44	43	45	52	60	53	51	53	53	50	54.2	
Grand Forks Airport	Maximum..	91	93	85	81	83	87	83	84	92	87	80	91	76	71	64	71	67	86	80	81	70	72	77	74	70	75	83	80	62	55	78.5		
	Minimum..	60	65	65	61	56	53	62	61	66	63	56	53	59	51	52	48	46	47	64	51	50	44	39	47	55	56	52	54	54	50	50	54.2	
Jamestown Airport	Maximum..	93	90	84	81	80	84	92	86	99	87	78	92	78	72	71	68	74	84	87	78	84	68	75	75	63	72	74	84	75	62	57	78.9	
	Minimum..	58	67	62	59	55	51	68	61	68	65	51	47	53	55	49	48	45	48	63	45	48	44	38	40	58	56	53	53	61	52	49	53.5	
Kenmare	Maximum..	71	78	79	74	80	84	88	82	88	80	75	85	74	61	76	70	75	80	77	80	84	74	79	73	69	78	85	86	63	70	76.9		
	Minimum..	56	60	58	59	53	53	59	59	62	55	55	55	56	50	51	53	42	53	58	50	53	45	45	49	61	65	54	52	57	49	46	53.6	
Langdon	Maximum..	79	85	79	72	80	81	82	85	78	80	72	84	81	71	74	72	72	73	86	76	77	70	73	75	71	71	79	78	76	63	53	75.7	
	Minimum..	61	58	59	57	48	54	62	59	62	54	54	48	53	44	50	46	40	48	58	48	44	36	37	45	45	55	54	50	53	50	46	50.9	
Marmarth	Maximum..	84	84	81	76	83	90	91	91	92	88	82	91	75	64	70	74	76	92	91	78	80	72	71	69	76	80	82	88	80	72	73	80.5	
	Minimum..	40	58	59	50	46	53	50	55	60	47	52	51	51	50	50	52	47	51	60	54	50	52	46	50	52	46	50	52	44	42	43	50.6	
Minot Airport	Maximum..	78	77	78	72	79	89	92	83	85	82	76	86	76	62	60	71	65	73	84	80	79	81	70	74	73	66	79	83	83	78	62	67	76.7
	Minimum..	62	59	54	59	53	53	59	63	62	59	56	54	59	52	51	51	42	50	59	46	50	48	42	43	57	54	52	54	52	50	50	53.4	
Mott	Maximum..	87	89	88	77	85	92	95	99	99	89	82	93	78	68	73	72	72	92	92	84	76	83	77	73	70	72	80	84	87	75	64	72	81.5
	Minimum..	58	62	60	50	45	56	64	57	66	52	50	50	51	52	52	50	49	41	49	51	52	40	44	55	45	44	52	45	55	50	45	61.4	
Pembina Airport	Maximum..	84	81	80	70	80	85	83	90	81	82	75	86	75	72	73	73	73	76	84	75	75	68	71	78	77	68	79	77	74	60	53	76.2	
	Minimum..	60	61	64	60	53	56	59	60	63	59	58	52	56	50	54	53	46	44	57	55	49	42	42	41	52	55	55	51	53	51	50	53.6	
Sharon	Maximum..	90	92	82	82	84	86	79	84	90	85	74	89	77	70	70	64	70	74	85	77	79	70	72	74	69	68	73	80	80	66	55	77.1	
	Minimum..	64	65	62	63	56	56	61	63	65	63	56	50	56	54	54	48	47	50	60	46	47	50	47	48	52	54	52	51	53	51	48	54.6	
Steele	Maximum..	90	90	86	78	79	83	90	90	97	87	86	90	84	70	68	72	84	86	75	82	75	73	70	70	88	75	84	74	63	67	79.9		
	Minimum..	61	63	58	54	52	68	60	64	56	48	56	51	50	52	48	40	51	61	46	44	49	35	47	59	50	53	49	59	50	47	52.7		
Valley City	Maximum..	82	89	84	81	89	83	85	85	94	90	79	92	88	68	66	70	80	85	79	81	78	72	74	70	66	71	82	76	73	55	78.7		
	Minimum..	62	67	63	61	57	53	66	64	68	67	56	48	65	52	54	50	49	49	59	48	49	54	42	43	55	56	51	51	57	53	48	55.1	
Wahpeton	Maximum..	86	87	89	86	82	83	86	91	96</																								

Daily Precipitation for August 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James		.02					.02		.04						.61		.32													.11	.12	3.51	
Casselton	Red	.18	4.00	.36	.88			.05	.08	.30					.05	.45	.15	.05													.25	.70	8.70	
Cooperstown	Sheyenne			.15	.23			.96		1.42					.01	.29	.41														.30	1.38	7.34	
Courtenay	James			.86	T.			.21	.04	1.49					.01	.15	.19														.24	1.20	6.79	
Devils Lake ^{1 5}	Devils Lake	T.	T.	.69	.18			.70	.43	.03					.17	.13															.55	.58	6.55	
Edgeley	James			.12	.36				.11	.45					T.	.42	.70															.34	T.	4.97
Edmore	Devils Lake	.35	.06	2.63	.78			.70	.05	.35					.49	.02															.21	.50	1.91	
Ellendale	James	.03	.06	.18	.04			.17							1.22	.21	.17			.25	T.										.27	.06	4.90	
Fargo ^{1 5}	Red		3.07	1.48	.49			.05	.16	T.					.22	.42	.37			.02												.38	.58	8.52
Forman	Sheyenne		T.	T.	.42										.73	.17															.10	.23	.95	
Fullerton	James		.07		.10			T.							T.	.81	.39				.02										.52	.19	4.23	
Gackle	do			1.25												1.29															.16		4.34	
Grafton	Red			1.39	.67			.65	.02	1.56						.45		.17													1.65	1.11	8.25	
Grand Forks Airport ³	do		.39	.12	.18			2.21	1.91	.03					T.	.47	.03	.09													1.98	3.87	59.12	
Hankinson ²	do		.11	1.34	.16				.01							.83	.01	.03													.91	.42	4.90	
Hannah	Pembina		1.01	.31	.03			.32	T.	.10	.24					T.	T.														.03	2.05	2.80	
Hillsboro	Red		.17	1.70	.26			1.14	.11	1.05					.02	.47	.52	.12													.51	.88	8.83	
Jamestown Airport ³	James		.02	.97	.22			.15	.04						.24	.01	.48														.03	.33	.51	
Langdon	Pembina	1.25	.78	.52	.48			.36	.02	.06	.02					.47	.03														.10	.07	85.2.30	
Larimore	Red			.24	.12			1.97	.03	1.07						.29		.15														.05	.03	30.1.17
Lisbon	Sheyenne		.17	.23	1.30				.53							.43		.46														.11	.18	.65
Mayville	Red			2.75	.25			2.20	.28	1.64						.38	.28	.09													.23	.40	83.10.23	
McInterv	James			.34	.06			1.64	.05	.09						.10	.43	.81													.07	.41	.45	
McLeod	Sheyenne			T.				.32								.81	.24															.17	.52	
Oakes ²	James		T.		.27											.71	T.	.22													.21	.19	3.05	
Park River	Red			1.58	.51			.57	1.40	.06						.25		.06													.20	.22	1.70	
Pembina Airport ³	do		.76	1.97	.75			.77	T.	.06	.18					.42	.03	.04														10.2.53	1.08	9.03
Petersburg	do			.58	.37			.62	.02	.39						T.	.28	.11														.27	T.	59.1.40
Sharon	do		T.	1.87	.22			2.92	.07	.65						.01	.57	.29														.01	.38	1.64
Valley City	Sheyenne		.09	.58	1.47			.40	.15	.02						T.	.50	.28														2.17	1.13	35.9.99
Wahpeton	Red	.03	T.	1.92	.32			T.								.92	.03	.02	T.													.83	.70	5.95
Middle Division																																		
Ashley ³	Missouri		.18	.04				.13	.22	T.						.55	.04	.39													.16	.07	3.02	
Bisbee	Devils Lake		.85	.50	.63			.35	T.	.09						.15	.04														.28	.15	.40	
Bismarck ^{1 5}	Missouri	T.	.04	.91	T.				1.19	T.						.07	.01	.32														.78	.75	5.05
Bottineau ²	Mouse		1.14	.11	1.10	.51										.09	T.	.09														.15	.02	3.53
Butte	do		.05	.40				.03	T.	.06						.05	.38	.36														.23	.20	2.39
Carson	Heart		.40	.36				.07	.09	.50						.07	.09	.50														.29		2.24
Center	Missouri			.13												.20	.40	.10														.30	.25	2.33
Drake ²	Mouse			.42	.09			.42	.08	.02						T.	.30	.04	.32													.02	.13	.11
Dunseith	do	T.	1.55	.13	1.13			.83	.01	.01						.04	.07															.13		.15
Eckman	do			.53	.65			.20								.15	.09															.61	.05	4.72
Fessenden	James			.17	T.			.17	.40							.09	.16	.74														.40	.63	3.48
Fort Yates	Missouri				.40			.45	.55							.45	.55															T.	.40	2.30
Foxholm	Mouse	.02	1.36	.20	1.88			.05		T.	.07					T.	.20	.01														.54	.04	6.21
Garrison ³	Missouri		.07	.29	.05			.62	.06	.09						.62	.06	.09														.13	.08	2.87
Granville	Mouse		.27	1.09	.32			.08	T.							.04	.17	.18														.38	.04	.03
Hansboro	Devils Lake		.56	.61	.40			.18		.03	.02					.01	.04															.05	.93	.19
Linton	Missouri		.18	.37	.47			T.								.06	.47	1.10														.10	.33	4.70
Maddock	Sheyenne			.19	.03			1.26	.19							T.	.43	.26														1.69	.03	4.59
Mandan ²	Missouri		.01	.07	1.01	T.				.07	.01					.07	.03	.32	.05													.01	.08	T.
Max ²	do		.06		.39			.08								.50	T.	.03	T.													.37	.89	.05
McClusky	do	T.														.34	.13															.42	.01	T.
Minot Airport ³	Mouse	.01	.30	1.03	.05			.13	.03	T.						.16	.02	.16														.07	.01	.61
Mohall	do	.09	.49		1.09			.18		.41	.11					.02	.12	.08														.71	.09	4.76
Napoleon ²	Missouri		.07	2.60				.04																										

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

Vol. LIII BISMARCK, N. D., SEPTEMBER 1944 No. 9

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Temperature and precipitation were near normal throughout the month. Because of the considerable damp, foggy weather that prevailed and the unusually heavy precipitation during August difficulty was experienced with harvesting and threshing. Some potato fields in the Red River Valley were under water which caused considerable loss in a few sections. Killing frost occurred at most places in the northern and western counties on the 23d and again on the 30th, but many stations in the southeastern and south-central parts of the state had no frost during the month. Highest temperatures occurred on the 8th and 24th. The range between the high and low temperatures was not great and only one station reported a 90° reading. The precipitation was well distributed throughout the state and through the month. No severe storms were reported. Although small grain was damaged somewhat by the wet weather the crop condition was considerably above average and corn was an excellent crop. Pastures remained green throughout the month and livestock were in good condition.

TEMPERATURE

The mean temperature for the state was 56.4°, or 0.4° below the 1892-1944 average for September. The mean temperature for the eastern division was 56.6°; for the middle division, 56.4°; and for the western division, 56.3°. The highest mean temperature was 60.2° at New England, and the lowest, 52.9° at Medora, making a range in mean temperature of 7.3°. The absolute range was 70°, from 91° at Center on the 8th, to 21° at Dunseith and Powers Lake on the 30th. The average daily excess in temperature for the state since January 1, 1944, is 1.1°.

PRECIPITATION

The average precipitation for the state was 1.46 inches, or 0.08 inch less than the 1892-1944 average for September. In the eastern division the average amount was 1.32 inches; in the middle division, 1.55 inches; and in the western division, 1.50 inches. The greatest monthly amount reported was 3.34 inches at Steele; the least was 0.36 inch at Sanish. The greatest amount recorded in any 24 consecutive hours was 2.00 inches at Upham on the 15th. The accumulated excess in precipitation for the state since January 1, 1944, is 3.92 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.52	23	29.51	17	9.1	29	se.	29	80	87	59	57	60	233
Devils Lake...	30.51	23	29.57	17	7.8	24	ne.	30	85	93	62	62	31	275
Fargo	30.47	23	29.51	1	10.5	29	n.	30	88	92	69	71	45	216
Williston.....	30.49	23	29.49	16	6.1	22	w.	20	71	83	52	43	70	241

† And other dates.

VETERAN OBSERVERS

With the resignation of Mr. George B. Gee, Powers Lake, N. D., on September, 30, 1944, North Dakota lost its oldest weather observer. Mr. Gee is 90 years old and is still active in his print shop. A few years ago Mr. Hall, the observer at Elbowoods, N. D., died at the age of 93. Two younger observers, Mr. F. O. Alin at Fullerton and Mr. C. J. Hoof at Napoleon have taken observations continuously for nearly 50 years.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	4	16	8	2	1	2	...	...	4	13	10	14	51	40	28	2	...	1	3	4	...	4	16	...	1	10	11	12	...	4	...
Lunar halos ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Solar halos ..	...	...	3	...	...	...	...	...	4	...	...	...	...	...	1	...	...	...	1	...	...	...	2	...	1	1	...	...	1	...	...
Hail .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thunderstms.	1	21	6	...	...	...	1	5	7	1	...	...	...	5	19	1	4	10	1	...	1	6	...	...	1	...	...	...	...	2	...

COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	59.2	101	24	1.08	1.05	0.40	0.84	0	4	16	7	5
1893...	57.1	102	8	0.75	0.75	0.94	0.81	0.1	4	18	7	7
1894...	58.2	104	18	1.06	1.67	1.42	1.38	0	5	15	7	8
1895...	56.6	100	12	1.29	0.61	0.42	0.77	0	4	12	12	6
1896...	53.0	98	11	2.25	2.00	0.57	1.61	0	6	12	8	10
1897...	64.1	109	18	0.24	0.25	0.35	0.28	0	2	20	7	7
1898...	56.8	98	10	1.85	1.00	0.90	1.25	0	4	14	9	7
1899...	55.0	101	11	0.60	0.57	0.57	0.58	T.	3	17	9	4
1900...	54.6	98	17	5.15	5.26	4.44	4.95	T.	8	12	7	11
1901...	53.6	100	12	2.41	1.80	1.82	2.01	T.	7	10	8	12
1902...	53.6	95	15	1.24	0.54	0.44	0.74	0	4	16	8	6
1903...	51.6	90	18	3.36	2.85	2.77	2.99	0.7	7	12	6	12
1904...	54.7	96	18	2.12	1.18	1.00	1.43	0	5	14	7	9
1905...	50.8	104	23	1.62	1.65	1.74	1.67	0	5	16	8	6
1906...	62.8	109	20	1.54	0.73	1.07	1.11	0	4	19	6	5
1907...	52.1	96	9	2.39	1.11	0.68	1.39	T.	6	14	8	8
1908...	60.7	104	16	0.87	0.89	1.97	1.24	0.2	4	17	7	6
1909...	59.0	93	24	1.03	0.77	1.04	0.95	0	4	16	8	6
1910...	55.3	99	18	2.38	1.88	1.10	1.79	0.1	4	14	7	9
1911...	54.9	95	21	2.32	2.41	2.38	2.37	T.	8	12	8	10
1912...	51.5	101	18	3.54	2.50	1.82	2.62	0	10	11	6	13
1913...	57.2	108	8	2.39	1.47	1.37	1.74	0.4	6	16	8	6
1914...	59.3	98	25	1.24	1.00	0.84	1.03	0	5	16	8	6
1915...	54.6	104	23	2.42	2.60	1.94	2.32	0	9	10	8	12
1916...	55.1	99	15	2.12	1.07	1.10	1.43	T.	6	14	9	7
1917...	56.4	97	16	1.53	0.93	0.65	1.04	0	5	12	9	9
1918...	51.9	93	11	0.46	0.40	0.33	0.40	T.	3	15	9	6
1919...	58.6	100	20	0.92	1.05	0.86	0.94	0.3	5	12	10	8
1920...	59.0	99	19	3.94	1.19	1.49	2.21	T.	8	15	9	6
1921...	57.0	101	25	3.91	3.37	2.34	3.21	T.	12	12	10	8
1922...	59.8	104	23	2.42	2.00	1.89	2.10	0	6	16	8	6
1923...	60.1	99	15	2.04	2.25	3.25	2.51	0	6	14	8	8
1924...	55.0	98	20	3.68	1.91	0.68	2.09	T.	7	15	7	8
1925...	58.1	103	20	4.18	2.23	1.61	2.67	T.	8	12	8	10
1926...	52.3	95	9	2.80	2.44	1.66	2.30	0.5	9	11	9	10
1927...	56.8	101	10	1.06	0.47	1.48	1.00	T.	3	16	9	5
1928...	53.9	95	12	1.50	0.75	0.74	1.00	T.	5	17	7	6
1929...	52.7	105	12	1.65	1.82	1.47	1.65	0	5	11	9	10
1930...	56.2	98	10	1.02	0.88	1.17	1.02	0	4	16	9	5
1931...	61.4	107	27	1.97	2.38	2.06	2.14	T.	6	18	7	5
1932...	56.8	102	22	1.10	0.56	0.23	0.63	0	3	18	8	4
1933...	60.9	101	22	1.03	0.71	0.70	0.81	0	4	16	8	6
1934...	52.4	95	9	1.28	0.86	0.74	0.96	2.0	7	11	9	10
1935...	57.2	105	16	0.73	0.44	0.12	0.43	0	3	15	9	6
1936...	60.3	102	12	1.47	1.29	0.68	1.15	T.	5	15	10	5
1937...	58.6	104	20	1.21	1.60	1.61	1.47	0.1	6	13	9	8
1938...	61.9	99	21	0.95	0.34	0.61	0.63	0	4	17	7	6
1939...	58.9	98	11	1.12	0.47	0.45	0.68	0.2	5	15	8	7
1940...	62.8	103	20	0.87	0.98	1.32	1.06	0	4	17	9	4
1941...	55.3	94	17	5.22	4.71	3.91	4.61	0.2	11	9	10	11
1942...	54.0	99	4	1.71	1.62	1.67	1.67	2.7	9	12	9	9
1943...	55.6	94	19	0.84	0.37	0.33	0.51	0	4	17	9	4
1944...	56.4	91	21	1.32	1.55	1.50	1.46	T.	8	12	10	8
Period	56.8	109	4	1.87	1.46	1.30	1.54	0.1	6	14	8	8

Climatological Data for September 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	56.6	-0.3	82	8	29	23	1.03	-0.34	0.39	3	0	9	15	6	9	nw.	Soo Line Agent.
Casselton	Cass	934	48	58.0	+0.1	80	18†	31	24	1.07	-0.83	0.50	8	0	6	14	8	8	s.	C. Hayford.
Cavalier	Pembina	894	34	57.2		80	24	36	23	2.20	-0.12	0.92	1	0	9	5	18	7	se.	City Light & Power Co.
Colgate	Steele	1,180	11							0.99	-0.84	0.42	11†	0	4	15	10	5	se.	O. M. Jensen.
Cooperstown	Griggs	1,428	47	57.4	-0.3	81	8†	29	23	1.54	-0.22	0.76	3	0	6	11	6	13	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	14							1.55	-0.29	0.75	3	0	7	11	12	7	sw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	55.9	0.0	81	8	32	30	1.59	-0.04	1.16	2-3	0	10	4	11	15	n.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	57.2	-1.1	83	8	32	23	0.89	-0.77	0.33	22	0	6	12	10	8	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	20	52.2	-3.5	78	8	25	23	1.59	-0.26	0.48	3	0	12	12	10	8	n.	Mike Davis.
Ellendale	Dickey	1,457	49	57.4	-1.4	82	8	33	29	1.42	-0.26	0.61	9-10	0	7	14	5	11	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	17	58.1	-0.1	84	17	37	23	1.40	-0.82	0.70	9-10	0	8	5	13	12	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	58.7	-0.8	84	8†	34	29	0.46	-1.61	0.19	22	0	4	16	5	9	n.	Helge Dyste.
Fullerton	Dickey	1,439	46	57.1	-0.9	80	8	35	23	1.05	-0.91	0.51	22-23	0	11	10	11	9	nw.	F. O. Ahn.
Gackle	Logan	1,951	14																	Jack Dixon.
Grafton	Walsh	827	52	57.6	+0.6	78	8	31	30	2.75	+0.59	1.50	3	0	7	12	10	8	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	56.6	-0.3	77	24	33	23	1.10	-0.82	0.46	30	0	9	7	13	10	n.	University of N. Dak.
Grand Forks Airt. 2½ mi. W	Grand Forks	832	4	56.2		77	4†	32	23	0.65		0.40	30	0	8	7	10	18	n.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	58.0	-2.5	87	16	38	20†	0.97	-1.13	0.40	16	0	7	11	5	14	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	54.7	-0.1	78	8	28	27	1.50	-0.61	0.60	15-16	0	6	6	7	17	se.	A. E. Prior.
Hillsboro	Traill	901	44	58.0	-1.0	79	17†	34	23	1.53	-0.54	0.83	30	0	8	5	14	11	ne.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	52	57.8	+0.8	85	8	34	23	0.77	-0.90	0.35	27	0	6	9	9	12	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,491	4	56.3		83	8	32	23	0.83		0.36	27	0	10	6	13	11	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	55.6		80	8	29	23	2.42		1.70	3	0	8	8	11	11	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	54.7	+1.2	78	8	30	23	1.73	-0.50	0.42	3	0	14	8	12	10	.....	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	56.0	-0.4	77	8	32	23	1.36	-0.69	0.40	1	0	8	11	4	15	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	57.5	-0.6	82	8	36	23†	0.96	-1.04	0.42	10	0	9	11	3	16	nw.	J. O. Halverson.
Mayville	Traill	975	48	57.2	-1.3	77	4†	33	23	1.66	-0.40			0		9	10	11	n.	H. B. Addicott.
McHenry, 3 miles NE	Eddy	1,509	22	54.3	-1.5	79	8†	28	23	1.25	-0.18	0.61	3	0	10	6	13	11	w.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	33	58.2	-1.4	85	17	38	22	0.55	-1.48	0.32	11	0	4	17	6	7	sw.	J. G. Carlson.
McVille	Nelson	1,467	14							1.70		0.86	3	0	9	6	14	10	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	55.0		76	4†	34	23	0.50	-1.60	0.35	11	0	3	21	7	2	nw.	E. W. Wilson.
Oakes	Dickey	1,318	15	56.6	-2.4	81	8	33	28	1.16	-0.60	0.41	22-23	0	6	13	3	14	nw.	F. H. Murray.
Park River	Walsh	998	40	54.6	-2.3	77	8	32	23	1.48	-0.67	0.94	3	0	6	14	8	8	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	55.6	+1.1	76	8	32	23	0.99	-1.19	0.66	3	0	6	2	14	14	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	55.0		78	8	30	23	1.99	+0.02	1.25	3	0	8	9	13	8	nw.	T. M. Rykken.
Sharon	Steele	1,516	20	55.9	-1.5	78	8	31	23	1.54	-0.51	0.93	30	0	11	7	10	13	nw.	Nels O. Grefsheim.
Valley City	Barnes	1,229	38	54.0	-0.8	78	8	33	23	1.01	-0.79	0.40	9-10	0	7	14	6	10	nw.	I. C. Robertson.
Wahpeton	Richland	962	52	59.2	-0.8	86	17	36	23†	1.39	-0.83	0.44	9-10	0	10	10	7	13	nw.	W. J. Cavanaugh.
Average for Eastern Division				56.6	-0.9	87	16	25	23	1.32	-0.62	1.70	8	0	8	10	10	11	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	55.2	-2.7	86	8	32	30	0.96	-0.51	0.67	22	0	8	6	12	12	n.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	56.4	-0.3	81	8	28	23	1.69	0.00	0.69	26	T.	10	10	10	10	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	58.0	-0.1	83	8	37	30	1.02	-0.42	0.48	27	0	6	7	12	11	nw.	U. S. Weather Bureau.
Bismarck Airt. 2½ mi. SE	Burleigh	1,650	5	57.4	+0.1	83	8	36	30	1.34	+0.11	0.43	27	0	8	7	12	11	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	54.9	-0.6	77	8	29	23	1.60	+0.01	0.67	15	T.	9	11	7	12	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	56.6	-0.9	78	14†	33	28	1.75	+0.27	0.68	3	T.	10	12	7	11	nw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	32	57.6	-0.5	87	8	32	23†	1.46	+0.02	0.50	27	0	8	11	11	8	nw.	J. W. Evans.
Center	Oliver	2,100	6	57.8		91	8	33	16	2.46		0.69	27	0	7	10	12	8	nw.	Fred L. Heinz.
Drake	McHenry	1,634	15	55.8	-1.8	80	8†	33	28	1.30	-0.13	0.73	2	0	8	17	3	10	nw.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	48	54.6	-0.4	76	8	21	30	1.46	-0.21	0.54	15	T.	12	13	7	10	nw.	Hubert Downs.
Eckman	Bottineau	1,500	39	55.9	+0.2	79	24	28	28	1.59	+0.09	0.95	15	0	8	7	17	6	nw.	E. R. Sherman.
Fessenden	Wells	1,610	32	56.5	-0.1	84	24	33	28	0.86	-0.65	0.25	30	T.	9	15	9	6	w.	John V. Zuber.
Fort Yates	Sioux	1,670	44	57.8	-2.4	82	3	32	28	1.80	+0.35	0.75	3	0	5	21	4	5	se.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	23	55.6	-0.6	79	8†	25	30	1.25	-0.30	0.74	15	0	8	18	9	3	se.	E. C. Bierbaum.
Garrison	McLean	1,911	67	55.7	-0.2	82	8	30	30	1.53	+0.07	0.40	30	0	9	13	8	9	w.	Mae H. Vorachek.
Granville	McHenry	1,504	37	57.2	+1.3	81	24	31	23	1.00	-0.56	0.25	15	0	8	17	5	8	nw.	Fred Roble.
Hansboro	Towner	1,597	36	58.9	-0.3	78	8	30	29	1.10	-0.76	0.34	3	0	11	11	10	9	nw.	W. E. Disher.
Harvey	Wells	1,596	41							0.45	-0.98	0.18	3	0	0	5	7	18	s.	Orville Hoksche.
Leeds	Benson	1,515	4	55.7		81	8	27	23	0.72		0.32	3	0	7	9	11	10	w.	John Dulmage.
Linton	Emmons	1,711	27	58.6	-1.2	84	8	34	6†	1.22	-0.35	0.47	22-23	0	9	8	9	13	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	56.2	-0.7	79	8	28	23	1.47	-0.19	0.97	3	0	7	9	9	12	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	30	57.0	-1.6	83	8†	35	23†	1.10	-0.36	0.46	27	0	7	11	7	12	sw.	No. Gt. Plains Field Sta.
Max	McLean	2,098	15																	A. W. Rice.
McClusky	Sheridan	1,943	26	57.4	+0.2	82	8	31	30	1.79	+0.42	0.57	2							

Climatological Data for September 1944—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours †	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division																				
Epping	Williams	2,224	33	56.8	+0.1	85	7	30	19†	0.48	-0.81	0.20	30	T.	5	23	5	2	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	7							1.52	+0.14	0.60	22	T.	7	17	5	8	se.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	57.1		81	14	32	30	1.88	+0.54	0.55	9	T.	9	14	10	6	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	55.4	-2.0	89	1	28	30	1.62	+0.35	0.92	26-27	T.	9	10	11	9	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35	56.8	+1.5	89	7	27	30	0.36	-0.87	0.11	2	T.	5	16	12	2	nw.	John S. Sorenson.
Halliday	Dunn	2,073	3							2.08		0.75	30	T.	6	19	7	4	nw.	John Kisse.
Hettinger	Adams	2,675	36							1.65	+0.35	0.60	27	0	5	23	5	2	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	56.3	+0.1	80	7†	32	30	0.60	-0.97	0.17	9-10	T.	7	20	1	9	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	57.8	0.0	86	7	24	26	1.55	+0.29	0.99	27	T.	4	15	7	8	nw.	S. P. Grane.
Medora	Billings	2,271	28	59.8		88	7	32	21†	1.65	+0.33	0.64	30	0	7	19	8	3	w.	Harry Roberts.
Mott	Hettinger	2,424	36	57.4	-0.4	85	8	32	30	1.44	+0.07	0.53	27	T.	8	24	2	4	nw.	P. G. Wick.
New England	Hettinger	2,621	49	60.2	+2.8	85	8	33	30	1.84	+0.47	0.74	27-28	0	7	14	9	7	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		3	56.2		78	7†	32	30	2.17		0.90	2	0	11	17	8	5	se.	Peter F. Ficek.
Parshall	Mountrail	1,929	28	56.3	+1.0	80	7†	27	28	1.42	-0.07	0.73	15	T.	7	12	17	1	se.	C. E. Shubert.
Portal	Burke	1,954	38	54.6	-0.6	79	7†	31	19†	0.80	-0.66	0.32	8	T.	8	18	4	8	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	54.2	-2.1	77	7	21	30	1.44	+0.15	0.43	29	0	7	13	11	6	se.	Geo. B. Gee.
Richardton, 1½ miles N.	Stark	2,467	27	56.6	-1.6	80	8	29	30	1.85	+0.53	0.53	27	T.	8	13	11	6	se.	Assumption Abbey.
Ryder	Ward	2,108	15							1.57	+0.05			0	7	6	14	10	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	54.7	-0.8	82	8	27	19†	0.36	-0.98	0.11	2	0	5	10	18	2	.....	H. J. Bugge.
Stanley	Mountrail	2,258	6	54.4		80	7†	26	23†	0.49		0.12	2†	0	5	14	8	8	w.	Leroy Edwards.
Tagus	Mountrail	2,179	15							1.04	-0.36	0.83	15	0	2	13	16	1	nw.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15											0	7	7	21	2	.....	H. Francis Cannon.
Trotters	Golden Valley		18							2.70	+1.47	0.75	22	0	7	7	21	2	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	56.2		84	14	28	19†	0.60		0.23	2	T.	5	10	4	6	se.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	57.3	-0.4	85	7	30	30	1.76	+0.45	0.54	22	T.	7	16	9	5	se.	J. C. Zeller.
Wildrose	Williams	2,258	16							0.51	-0.68	0.15	5	0	6	21	8	1	nw.	Jonathan Winkjer.
Williston	Williams	1,878	64	57.1	+0.5	85	7	27	30	1.10	+0.01	0.57	22	0.5	7	11	10	9	se.	U. S. Weather Bureau.
Average for Western Division				56.3	-0.6	89	1†	21	30	1.50	+0.16	1.45	2	T.	7	15	9	6	nw.	
Average for the State				56.4	-0.4	91	8	21	30†	1.46	-0.08	2.00	15	T.	8	12	10	8	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for September 1944

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	74	73	77	79	64	72	76	86	70	63	63	66	63	78	62	79	72	67	59	74	70	48	60	76	70	63	51	67	67	53	.....	68.1
	Minimum	36	49	53	52	38	34	45	48	50	52	50	46	44	45	44	41	49	39	33	43	37	41	34	41	40	39	40	34	43	32	.....	42.4
Bismarck Airport	Maximum	75	72	78	78	64	74	80	83	63	61	69	70	69	80	64	80	67	67	59	73	71	50	62	80	71	60	60	67	72	53	.....	69.1
	Minimum	40	51	57	50	45	40	46	54	53	49	47	41	46	52	50	44	53	43	45	47	40	46	37	42	42	47	46	36	45	36	.....	45.7
Bottineau	Maximum	73	64	75	74	67	73	71	77	66	64	71	73	62	75	57	74	64	58	58	70	64	57	63	76	57	58	62	66	69	41	.....	66.0
	Minimum	43	50	54	49	48	42	46	54	50	58	56	43	49	47	53	41	52	44	31	40	35	35	29	37	43	43	39	30	41	31	.....	43.8
Carson	Maximum	76	78	79	81	67	76	83	87	69	64	73	73	74	83	73	80	71	67	63	74	75	59	65	82	75	71	59	68	71	62	.....	72.6
	Minimum	38	50	50	46	45	36	48	52	42	42	45	40	45	50	48	40	46	44	45	44	34	42	32	41	39	46	46	34	39	32	.....	42.7
Crosby	Maximum	75	74	77	78	72	78	84	77	68	68	77	76	76	80	68	76	65	56	64	70	73	57	68	80	67	61	65	69	71	36	.....	70.2
	Minimum	38	39	40	46	46	41	41	48	51	40	38	39	41	45	48	41	41	36	30	32	39	37	31	32	34	34	35	30	32	31	.....	38.5
Devils Lake	Maximum	67	62	63	76	65	72	77	81	67	63	63	70	68	74	58	77	64	62	56	68	64	56	62	77	60	55	62	65	68	52	.....	65.8
	Minimum	51	51	56	52	47	44	45	54	53	53	50	46	51	50	52	47	53	44	40	46	42	38	34	46	43	44	43	35	39	32	.....	46.0
Dickinson Airport	Maximum	77	74	74	75	68	74	82	80	65	62	71	72	72	80	60	79	64	61	65	70	70	49	63	79	74	65	59	65	69	54	.....	69.1
	Minimum	42	50	51	50	46	43	49	54	50	43	46	46	44	49	48	47	45	42	42	43	38	42	39	47	40	44	43	38	40	30	.....	44.4
Dunn Center	Maximum	74	65	77	77	63	74	82	81	67	62	72	75	75	81	56	80	64	65	59	71	69	47	63	79	78	62	59	65	71	38	.....	68.4
	Minimum	37	38	49	45	46	37	37	42	48	42	41	41	37	38	46	41	42	43	33	39	35	35	32	30	38	38	39	31	31	35	.....	39.0
Fargo Airport	Maximum	64	72	69	79	68	70	78	75	73	62	61	67	71	73	75	75	84	67	58	65	66	60	62	76	67	61	56	64	67	54	.....	68.0
	Minimum	53	57	58	53	46	40	46	52	52	56	56	54	54	54	53	49	57	47	42	45	46	45	46	39	37	42	47	48	45	38	.....	48.2
Fessenden	Maximum	74	69	72	75	70	73	79	79	74	58	62	70	65	77	73	76	72	65	61	68	65	65	66	84	64	54	62	66	73	62	.....	69.1
	Minimum	43	41	55	50	49	41	46	53	53	49	53	43	49	46	52	45	53	46	35	42	38	35	34	34	34	44	45	33	41	35	.....	43.9
Fullerton	Maximum	71	73	75	76	69	71	74	80	69	62	63	67	66	76	69	75	75	66	60	72	67	58	60	75	69	61	55	64	67	57	.....	68.1
	Minimum	44	48	56	54	50	38	44	45	53	54	55	55	51	46	53	40	61	49	39	39	43	42	35	41	42	45	51	37	36	38	.....	46.1
Garrison	Maximum	73	69	77	77	67	75	79	82	67	59	73	73	72	82	62	78	63	66	52	70	71	50	64	80	70	58	61	68	72	52	.....	68.7
	Minimum	40	48	53	47	46	39	45	51	51	48	48	44	48	48	48	42	49	38	35	41	38	40	31	41	39	40	41	32	40	30	.....	42.7
Golva	Maximum	89	76	78	78	70	76	87	82	67	62	72	74	77	81	65	80	63	64	67	72	72	53	68	81	83	71	58	66	70	52	.....	71.8
	Minimum	33	47	42	44	41	40	40	51	44	41	41	36	38	43	44	44	43	36	33	37	31	38	33	41	31	46	40	31	33	28	.....	39.0
Grafton	Maximum	62	65	66	77	74	62	71	78	77	69	67	74	68	72	72	73	73	62	64	69	68	63	62	73	75	51	61	65	68	65	.....	68.2
	Minimum	52	52	57	55	51	41	39	49	52	56	57	54	54	42	49	47	59	49	38	43	46	40	32	45	47	44	42	52	32	31	.....	46.9
Grand Forks Airport	Maximum	61	65	69	77	66	66	74	77	72	65	65	72	65	74	70	77	75	68	58	66	65	60	63	77	60	60	60	66	69	53	.....	67.2
	Minimum	51	55	57	53	43	39	41	50	51	55	51	51	50	49	50	47	55	47	55	44	37	44	40	35	32	38	43	46	40	35	39	34	.....	45.2
Jamestown Airport	Maximum	72	66	70	79	67	72	78	83	65	60	64	70	66	76	61	76	72	68	55	70	68	56	60	79	66	58	60	68	68	53	.....	67.5
	Minimum	48	47	57	54	42	38	45	49	52	54	55	52	50	47	51	45	49	43	38	41	42	40	32	39	44	45	44	35	39	35	.....	45.1
Kenmare	Maximum	75	72	78	76	73	80	80	78	63	60	76	73	70	80	57	74	66	59	55	70	70	55	66	80	63	62	64	71	70	36	.....	68.4
	Minimum	40	45	48	48	49	48	44	53	52	45	44	46	50	48	50	46	51	42	35	42	40	40	35	42	41	42	45	37	45	32	.....	44.2
Langdon	Maximum	62	63	64	76	70	67	70	78	70	65	62	70	68	69	64	72	68	66	66	57	63	74	70	56	62	63	66	59	.....	65.8		
	Minimum	49	49	52	47	48	40	40	52	48	50	53	43	51	47	51	47	57	45	45	32	41	39	35	30	40	42	41	37	31	39	33	43.6
Marmarth	Maximum	90	77	77	80	70	75	86	82	60	68	73	74	76	78	72	81	68	63	67	72	73	68	64	79	83	84	69	65	72	62	.....	73.9
	Minimum	35	50	55	46	50	38	41	50	45	45	40	36	55	45	49	50	48	37	39	40	31	48	36	38	42	24	39	32	32	32	.....	41.6
Minot Airport	Maximum	71	67	77	76	67	74	79	78	61	69	70	75	70	79	63	79	64	61	55	71	69	61	64	79	63	61	58	70	70	49	.....	68.0
	Minimum	42	48	51	52	50	48	46	56	52	45	50	49	49	46	50	46	53	42	35	41	45	39	36	48	41	40	40	37	43	29	.....	45.0
Mott	Maximum	78	75	78	78	73	76	83	85	74	65	70	72	74	82	72	80	66	67	68	72	75	54	64	83	78	69	59	66	70	64	.....	72.3
	Minimum	35	50	50	47	46	34	45	49	50	43	47	46	38	49	48	43	47	44	47	40	35	34	35	40	37	45	47	33	37	32	.....	42.4
Pembina Airport	Maximum	60	64	63	75	64	64	71	76	66	68	67	71	64	71	67	73	69	63	56	68	61	59	62	76	55	56	60	64	63	54	.....	65.2
	Minimum	51	56	57	55	47	42	43	50	53	54	54	51	48	46	50	49	48	45	37	42	43	39	32	42	47	45	45	40	38	33	.....	46.1
Sharon	Maximum	64	62	66	76	66	72	74	78	70	61	62	70	65	73	63	73	71	65	55	65	64	56	61	75	61	59	59	65	66	55	.....	65.7
	Minimum	50	52	56	52	51	40	44	53	50	52	54	51	53	47	52	44	55	48	38	45	42	38	31	41	45	43	45	35	42	35	.....	46.1
Steele	Maximum	71	67	74	75	69	71	77	80	66	60	65	69	66	77	70	77	73	65	68	70	67	57	58	76	67	62	54	65	68	58	.....	68.1
	Minimum	38	45	50	48	47	36	42	50	50	47	51	44	46	49	51	40	56	45	39	42	37	39	30	40	42	41	49	32	40	34	.....	43.3
Valley City	Maximum	65	68	65	75	74	70	73	78	76	61	63	68	67	74	72	74	72	68	65	67	66	72	59	77	69	64	57	63	67	66	.....	68.5
	Minimum	50	50	58	55	52	40	43	48	52	53	54	54	53	51	52	47	59	49	49	42	42	42	33	40	49	45	48	38	37	38	.....	47.5
Wahpeton	Maximum	66	76	77	78	75	71	76	80	79	62	64	68	69	73	82																		

Daily Precipitation for September 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James	.18	T.	.39																													1.08
Casselton	Red.	T.							T.	.50	.17	T.	.05	.11		.02		.05		.04		.17							.08	.03			1.07
Cooperstown	Sheyenne			.76		.06				T.			.05			.14	T.		.07	T.									.25		.06		1.54
Courtenay	James			.75							.15	.04			T.	.02			.03	T.									.18		.38	.46	1.55
Devils Lake ^{1 5}	Devils Lake	.65	.51		.02	T.					.10	.31	T.			.10			.11	.01	T.							.04					1.59
Edgeley	James										.03	.18				.07			.03		T.			.33	T.			.04					0.89
Edinore	Devils Lake	.15		.48		.05	.05				.03	.20			.03		.10	.06		.18	T.							.24	.07			.02	1.69
Ellendale	James										.43	.18				T.					.08			.31	.21			.07					1.42
Fargo ^{1 5}	Red.	T.	T.	.04	T.	T.		T.		.68	.03	.07	T.			.29	.01		T.	T.	T.							.15			.13		1.40
Forman	Sheyenne									T.	.12	T.				T.			T.	.07				.19				.08					0.46
Fullerton	James					.04				.12	.10	.02	T.			.08				.01	.08		.42	.09			T.	.06				.03	1.05
Gackle	do																																
Grafton	Red.	.50	1.50								.03	.21				T.	.25		.09									.17					2.75
Grand Forks Airport ³	do	.03	T.	.05			T.				.03	.01				.05	.01		.07	T.	T.							T.				.40	0.60
Hankinson ²	do	.21								.09	.06		.13	T.			.50	.40	.06						.02								0.97
Hannah	Pembina			.40																	.20						.10	.20					1.50
Hillsboro	Red.	.06		T.		T.				.04	.30	.14	T.				.04				.09							.03					1.53
Jamestown Airport ³	James		.05	.01		.01				.24	.01	T.				.06				.02	.05							.25	.36				0.83
Langdon	Pembina	.25	.01	.42		.02					.10	.04		.02		.12	.25		.13	.01		.01						.25	.10				1.73
Larimore	Red.	.40		.32				.07				.13				.27		.11										.02					1.36
Lisbon	Sheyenne	.39					T.				.42	.01	.04							.01	.02							T.	.04				0.96
Mayville	Red.																																1.66
McHenry	James			.61	.06					.02	.06	.01		T.		.06			.20	.06	.05												1.25
McLeod	Sheyenne										.06	.32																					0.55
Oakes ²	James	.25								.29						.08																	1.16
Park River	Red.	.13	T.	.94			T.		T.		.09	T.								.07					.41				.21				1.48
Pembina Airport ³	do	.02	.02	.66		T.	.03		T.	T.	T.	.06				.18	.10		.01														0.99
Petersburg	do		1.25			T.					.06					.32	.11		.13	T.									.03				1.99
Sharon	do	.02	T.	.05		T.	.01		.02		.05	.05				.13	.05		.20	.03	T.												1.54
Valley City	Sheyenne			T.		T.				.11	.29					.05			.07	.05									.39				1.01
Wahpeton	Red.	.13	T.					T.		.25	.19	.15	.03				.31		.13	.03		T.						.09	.08				1.39
Middle Division																																	
Ashley ³	Missouri	.01					T.				.13	.02	T.				.03			.05			.67					.03					0.96
Bisbee	Devils Lake		.26		.12						T.	.07				.13	.05		.09	.06	T.							.69	.02				1.69
Bismarck ^{1 5}	Missouri	.23	.02		T.					.16	T.								.06	.02			.24						.43				1.34
Bottineau ²	Mouse		.19		.14		T.				.11					.01	.67	.35			.05							.05					1.60
Butte	do	.06	.68		.15				T.	.05	.03						.19			.30	.04	T.						.07					1.75
Carson	Heart		.10							.27							.07			.09	.24			.15	.04				.50				1.46
Center	Missouri	T.	.50		T.					.16	T.						.15			.29		T.		.15					.69				2.46
Drake ²	Mouse		.73		.09			.02		.04	.06						.08			.26		.02	T.										1.30
Dunselth	do	.10	.18		.22				.01	.02	T.					.54	.04		.13	.11	.01	.02											1.46
Eckman	do	.19	.02		.06			.09	.19	.05						.95																	1.59
Fessenden	James		.22		.09			.09	.05							.07				.04	.03								.02				0.86
Fort Yates	Missouri	.15	.75		T.					T.													.52					T.	.30				1.80
Foxholm	Mouse	.06		.08		.01	.01			.23	.05																						1.25
Garrison ³	Missouri	.24	.12		.03											.34			.07	.16			.05					.12					1.53
Granville	Mouse	.08	.21		.15					.03						.25	T.		.06										.01	.25			1.00
Hansboro	Devils Lake	.08	.34		.05	.02				.04						.25	.06		.11	.10									.01				1.10
Linton	Missouri	.03	T.		T.					.28	.02								.05	.08			.33	.14					.21				1.22
Maddock	Sheyenne		.97		.05	T.				.05	.04					.08			.15														1.47
Mandan ²	Missouri		.24							.11									T.	.02	T.		T.	.14					.46	.04			1.10
Max ²	do																																
McClusky	do	.32	.25		.09					.05	.04					.04			.12	.10	.14								.20				1.79
Minot Airport ³	Mouse	.07	T.		.04			T.		.19	T.					.61			T.														1.33
Mohall	do	.14	.02		.12					.76	.04					.81																	1.95
Napoleon ²	Missouri		.13		.01					.01	.19					.06			.30	.08			.22	.03					.20				1.28
New Salem	Heart		.24							.05						.11			.28				.36						.44				1.82
Pettibone	James		1.04		.04	T.				.09	.03					.10	T.		.14		.05												1.58
Rolla	Devils Lake	.04																															

51.05
IN NT
y.53'

Nat'l Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

PROPERTY OF THE
DEC 1 1944

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIII BISMARCK, N. D., OCTOBER 1944 No. 10

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GENERAL SUMMARY

Unusually warm, dry weather prevailed during the month of October. Only six other Octobers were warmer. An unusual feature was that the last half of the month averaged warmer than the first half. It was the driest October since statewide records began in 1892. Stations in all sections of the state had no measureable amounts of precipitation and more than half of the stations in the western division reported less than 0.01 inch. The average for the month in the western division was only 0.02 inch. The greatest snowfall was 0.2 of an inch at Marmarth. No snow fell in the eastern half of the state. It was an excellent month for outdoor work and progress in threshing was very good. By the close of the month one of the largest North Dakota wheat harvests was nearly completed and corn picking, potato digging, and beet lifting were well along. Freezing temperatures occurred only at intervals so pastures remained green, feed was plentiful, and livestock were in good condition.

TEMPERATURE

The mean temperature for the state was 48.7°, or 4.5° above the 1892-1944 average for October. The mean temperature for the eastern division was 47.8°; for the middle division, 49.0°; and for the western division, 49.2°. The highest mean temperature was 52.0° at Almont, and the lowest, 44.2° at Edmore, making a range in mean temperature of 7.8°. The absolute range was 73°, from 84° at Almont, Center, and New England on the 27th, to 11° at Carrington and Edmore on the 21st. The average daily excess in temperature for the state since January 1, 1944, is 1.4°.

PRECIPITATION

The average precipitation for the state was 0.12 inch, or 0.87 inch less than the 1892-1944 average for October. In the eastern division the average amount was 0.25 inch; in the middle division, 0.08 inch; and in the western division, 0.02 inch. The greatest monthly amount reported was 1.42 inches at Milnor; there was none reported at 37 stations and 19 other stations reported only a trace. The greatest amount recorded in any 24 consecutive hours was 1.20 inches at Milnor on the 5th. The accumulated excess in precipitation for the state since January 1, 1944, is 3.05 inches. The average snowfall was a trace.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	1	5	6	11	1	1	11	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lunar halos																															
Solar halos																															
Sleet	1	3																													
Thunderstorms																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.54	21	29.58	5	8.7	38	nw.	6	72	80	48	50	83	463
Devils Lake....	30.56	1	29.58	5	8.1	35	nw.	24	69	82	50	47	74	522
Fargo	30.54	21	29.63	5	10.7	37	nw.	6	84	88	61	67	71	533
Williston.....	30.48	7	29.54	31	5.7	26	w.	5	66	80	45	38	87	441

† And other dates.

COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	47.2	95	7	0.25	1.20	0.30	0.58	T.	3	15	8	8	
1893...	40.6	79	0	1.17	1.08	0.89	1.05	0.9	5	11	11	9	
1894...	43.0	77	16	2.28	1.76	0.94	1.66	0.0	6	14	8	9	
1895...	40.5	85	-12	0.31	0.15	0.27	0.24	0.0	2	16	8	7	
1896...	40.2	88	5	1.25	0.43	0.40	0.69	0.0	3	14	8	9	
1897...	45.9	93	6	1.01	0.75	0.56	0.77	0.8	4	13	9	9	
1898...	38.8	84	8	2.60	2.42	1.67	2.23	4.7	6	8	8	15	
1899...	42.1	86	7	1.16	1.21	1.15	1.17	1.2	5	11	8	12	
1900...	48.2	87	14	2.34	1.30	0.98	1.54	T.	6	15	4	12	
1901...	47.5	88	11	2.96	1.22	0.65	1.61	T.	5	17	7	7	
1902...	43.7	87	10	1.70	1.20	0.95	1.28	0.7	4	16	6	9	
1903...	47.0	81	11	1.42	0.80	0.60	0.94	0.2	3	19	5	7	
1904...	46.6	87	10	1.55	0.60	0.46	0.90	T.	5	12	7	12	
1905...	40.3	93	0	0.59	0.22	0.28	0.36	1.2	5	8	12	11	
1906...	45.0	89	0	0.75	0.45	0.27	0.49	1.4	4	14	9	8	
1907...	44.4	88	4	1.02	0.66	0.16	0.61	0.2	3	21	5	5	
1908...	43.0	86	8	1.46	1.36	2.07	1.63	0.7	6	11	7	13	
1909...	43.1	97	0	0.88	0.63	0.45	0.65	0.9	3	14	8	9	
1910...	48.2	95	0	0.49	0.66	0.38	0.51	0.1	3	16	8	7	
1911...	42.5	86	-10	1.25	1.27	1.20	1.24	0.5	6	11	8	12	
1912...	44.4	90	0	0.68	1.09	1.44	1.07	3.5	4	16	6	9	
1913...	39.3	90	-2	2.40	1.34	1.03	1.59	0.7	4	12	9	10	
1914...	50.0	97	0	1.20	0.93	0.65	0.93	T.	4	16	8	7	
1915...	46.6	87	10	1.22	0.91	1.14	1.09	0.2	4	17	8	6	
1916...	40.0	85	-2	0.49	0.88	0.73	0.70	2.0	4	12	8	11	
1917...	34.7	82	-4	0.87	0.76	0.71	0.78	6.4	5	8	11	12	
1918...	46.2	90	4	0.80	0.45	0.35	0.53	0.8	4	14	8	9	
1919...	33.5	84	-18	0.93	1.14	1.35	1.14	9.3	6	11	9	11	
1920...	49.3	95	6	0.53	0.28	0.83	0.55	0.1	2	16	8	7	
1921...	47.3	83	16	0.80	1.09	0.10	0.66	T.	4	16	8	7	
1922...	45.7	98	8	0.37	0.65	0.73	0.58	2.3	3	15	7	9	
1923...	44.0	84	-8	0.56	1.02	1.08	0.89	0.5	4	14	7	10	
1924...	50.3	86	19	2.31	2.14	2.82	2.42	0.3	7	17	5	9	
1925...	33.3	66	-16	0.83	0.64	0.96	0.81	3.7	6	8	9	14	
1926...	42.6	85	4	2.54	0.86	0.68	1.36	1.0	6	10	10	11	
1927...	47.0	88	12	1.53	1.49	0.96	1.33	1.0	5	14	8	9	
1928...	43.5	85	3	0.69	0.18	0.51	0.46	0.6	2	15	8	8	
1929...	46.8	88	10	2.87	1.63	1.05	1.85	5.1	6	17	5	9	
1930...	40.8	86	0	2.04	1.90	1.48	1.81	0.3	7	10	9	12	
1931...	47.7	90	10	2.63	0.93	0.60	1.39	0.2	6	15	6	10	
1932...	38.3	90	-3	2.33	2.41	2.06	2.27	9.1	8	9	7	15	
1933...	41.5	88	5	0.39	0.48	0.74	0.54	1.7	4	14	8	9	
1934...	49.0	94	5	2.11	0.83	0.08	1.01	0.1	3	14	8	9	
1935...	43.5	86	-10	0.29	0.08	0.12	0.16	0.7	2	15	9	7	
1936...	42.3	90	-5	0.23	0.16	0.24	0.21	1.1	3	14	9	8	
1937...	43.9	94	1	0.40	0.92	1.08	0.80	0.2	4	12	9	10	
1938...	50.9	95	4	0.27	0.44	0.95	0.55	1.1	4	16	7	8	
1939...	41.3	84	-6	1.17	0.64	0.44	0.75	1.2	7	8	10	13	
1940...	50.7	89	18	2.16	1.26	1.26	1.56	T.	6	14	8	9	
1941...	44.5	81	0	1.78	1.24	0.94	1.32	2.0	5	13	9	9	
1942...	46.5	90	-3	0.55	0.41	0.42	0.46	1.8	4	14	8	9	
1943...	48.2	89	10	0.86	0.64	0.78	0.76	2.8	3	18	6	7	
1944...	48.7	84	11	0.25	0.08	0.02	0.12	T.	1	21	8	2	
Period	44.2	98	-18	1.24	0.93	0.81	0.99	1.4	4	14	8	9	

Climatological Data for October 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Carriageton	Foster	1,579	46	49.6	+5.9	80	27	11	21	0.33	-0.70	0.30	1	0	2	12	17	2	nw.	Soo Line Agent.	
Casselton	Cass	934	48	50.0	+5.3	80	17	20	19	0.10	-1.25	0.10	6	0	1	19	10	2	nw.	C. Hayford.	
Cavalier	Pembina	894	34	47.0	.....	78	27	23	21	0.40	-0.89	0.40	6	0	1	12	19	0	s.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	.....	.....	.....	.....	0.00	-1.11	0	.....	0	0	25	6	0	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	47	47.8	+3.1	80	27	16	21	0.00	-1.08	0	.....	0	0	27	1	3	se.	R. J. Lockner
Courtenay	Stutsman	1,523	14	.....	.....	.....	.....	.....	.....	T.	-1.15	T.	17	0	0	23	7	1	sw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	48.4	+6.0	78	27	19	21	0.01	-1.24	0.01	10	0	1	14	14	3	s.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	43	49.4	+3.8	81	27	19	19	0.10	-0.92	0.10	2	0	1	18	11	2	s.	N. Dak. Agri. Exp. Sta.	
Edmore, 14 miles W.	Ramsey	1,524	20	44.2	+1.7	74	4	11	21	0.01	-0.97	0.01	8	0	1	26	3	2	s.	Mike Davis.	
Ellendale	Dickey	1,457	49	49.2	+3.3	80	27	21	20	0.67	-0.39	0.32	5	0	3	19	7	5	s.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	17	47.8	+3.3	78	17	22	19	0.17	-1.52	0.16	5-6	0	3	14	10	7	s.	U. S. Weather Bureau.	
Forman	Sargent	1,249	51	49.1	+6.1	78	17	24	21	0.88	-0.47	0.70	5	0	2	25	4	2	n.	Helge Dyste.	
Fullerton	Dickey	1,439	46	48.7	+3.4	78	27	22	21	0.63	-0.70	0.44	5	0	4	18	10	3	s.	F. O. Alin.	
Gackle	Logan	1,951	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	1	16	10	5	se.	Jack Dixon.
Grafton	Walsh	827	52	48.6	+4.8	78	27	20	21	0.20	-0.94	0.20	5	0	1	16	10	5	se.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	53	47.3	+3.6	83	27	20	21	0.16	-1.20	0.12	6	0	2	16	14	1	s.	University of N. Dak.	
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	832	4	45.7	.....	80	27	19	21	0.09	.....	0.07	6	0	2	17	10	4	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	47.8	+1.2	80	27	21	21	0.64	-0.73	0.32	2	0	4	18	3	10	nw.	Soo Line Agent.	
Hannah	Cavalier	1,568	52	46.3	+5.5	78	4	19	21	T.	-1.07	T.	6 1/2	0	0	15	13	3	sw.	A. E. Prior.	
Hillsboro	Trail	901	44	48.0	+2.8	80	27	23	19	0.08	-1.26	0.08	5	0	1	13	13	5	n.	Alfred Jahneke.	
Jamestown, 2 miles SE	Stutsman	1,457	52	49.4	+4.7	78	27	18	19	0.02	-1.27	0.02	17	0	1	22	6	3	s.	N. Dak. State Hospital.	
Jamestown Airt., 2 mi. NE.	Stutsman	1,494	4	48.2	.....	80	27	19	19	0.09	.....	0.09	17	0	1	22	6	3	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	47.8	.....	80	27	13	21	0.00	.....	0	.....	0	0	22	6	3	sw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	46.7	+5.8	77	27	18	21	0.15	-0.88	0.10	6	0	2	21	7	3	sw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	51	45.4	+1.3	77	27	17	21	0.15	-1.29	0.15	11	0	1	19	5	7	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	49.4	+4.7	79	17	21	19	0.53	-0.71	0.45	5	0	3	26	2	3	nw.	F. O. Halverson.	
Mayville	Trail	975	48	49.3	+3.3	80	27	21	21	T.	-1.26	T.	5 1/2	0	0	22	6	3	n.	H. A. Ragaz.	
McHenry, 3 miles NE	Eddy	1,509	22	45.9	+2.6	82	27	14	21	0.03	-1.02	0.03	5	0	1	21	8	2	sw.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	33	49.6	+3.1	80	18	20	21	0.40	-0.98	0.40	18	0	1	25	6	0	nw.	J. G. Carlson.	
McVille	Nelson	1,467	14	.....	.....	.....	.....	.....	.....	T.	.....	T.	6	0	0	17	12	2	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	45.1	.....	76	17	19	21	1.42	+0.06	1.20	5	0	3	23	8	0	nw.	E. W. Wilson.
Oakes	Dickey	1,318	15	48.8	+2.8	77	12	16	20	0.73	-0.58	0.52	5	0	2	20	7	4	nw.	F. H. Murray.	
Park River	Walsh	995	40	46.5	+2.8	77	26	19	21	0.00	-1.18	0	.....	0	0	26	4	1	s.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	45.2	+3.6	76	27	22	19	0.95	-0.25	0.91	6	0	3	9	14	8	s.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	14	46.6	.....	79	27	15	21	0.03	-0.15	0.03	5	0	1	14	14	3	sw.	T. M. Rykken.
Sharon	Steele	1,516	20	47.6	+4.0	76	27	20	19	0.02	-1.27	0.02	6	0	1	19	10	2	sw.	Nels O. Grefsheim.	
Valley City	Barnes	1,229	38	49.4	+4.3	79	27	19	21	0.04	-1.14	0.04	5	0	1	24	6	1	sw.	L. C. Robertson.	
Wahpeton	Richland	962	52	49.8	+2.8	78	17	20	21	0.31	-1.13	0.18	5	0	3	19	6	6	se.	W. J. Cavanaugh.	
Average for Eastern Division				47.8	+3.5	83	27	11	21	0.25	-0.99	1.20	5	0	1	19	9	8	s.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,014	48	47.8	+3.4	77	27	19	21	0.19	-0.87	0.15	1-2	0	3	9	19	3	s.	U. S. Airway Comm. Sta.	
Bisbee	Towner	1,601	41	47.9	+4.1	80	4	13	21	T.	-0.99	T.	6	0	0	25	4	2	nw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	70	51.4	+6.2	83	27	21	21	0.12	-0.79	0.08	1-2	T.	3	15	10	6	se.	U. S. Weather Bureau.	
Bismarck Airt., 2 1/2 mi. SE.	Burleigh	1,650	5	50.1	+5.5	82	27	21	21	0.08	-0.86	0.05	2	T.	2	15	10	6	se.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	52	47.2	+5.8	77	4	18	21	0.04	-0.93	0.04	7	0	1	21	6	4	nw.	N. D. School of Forestry	
Butte, 3 miles WSW	McLean	1,880	18	50.6	+5.8	78	27	22	21	0.00	-0.97	0	.....	0	0	20	11	0	sw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	32	51.2	+6.7	82	27	21	11	0.54	-0.37	0.54	17	0	2	21	6	4	s.	J. W. Evans.	
Center	Oliver	2,100	6	50.6	.....	84	27	.....	.....	0.00	.....	0	.....	0	0	19	11	1	nw.	Fred L. Hein.
Drake	McHenry	1,634	15	49.1	+6.0	81	4	21	11	0.17	-0.87	0.17	1	0	1	28	1	2	s.	H. G. Kringen.	
Dunseith, 2 miles NNE	Rolette	1,682	48	47.5	+5.9	77	27	18	21	0.08	-0.78	0.08	6	0	1	26	5	0	nw.	Hubert Downs.	
Eckman	Bottineau	1,500	39	47.4	+5.2	78	5	16	21	0.00	-0.84	0	.....	0	0	25	6	0	se.	E. R. Sherman.
Fessenden	Wells	1,610	32	49.4	+6.1	81	4	18	21	0.00	-1.06	0	.....	0	0	25	5	1	n.	John V. Zuber.
Fort Yates	Sioux	1,670	44	50.6	+3.9	82	27	19	10	0.45	-0.54	0.45	17	0	1	28	0	3	se.	P. J. Jacobson.	
Foxholm, 6 1/2 miles NE.	Ward	1,657	23	49.4	+6.5	78	5	21	21	0.00	-0.88	0	.....	0	0	29	1	1	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	67	49.4	+6.2	79	5	20	21	0.00	-0.86	0	.....	0	0	18	12	1	s.	Mae H. Vorachek.
Granville	McHenry	1,504	37	49.2	+5.6	79	4	18	21	0.00	-0.84	0	.....	0	0	28	3	0	s.	Fred Roble.
Hansboro	Towner	1,597	36	46.7	+5.4	79	4	18	2	0.08	-0.96	0.08	6	0	1	22	7	2	sw.	W. E. Disher.	
Harvey	Wells	1,596	41	.....	.....	.....	.....	.....	.....	T.	-1.07	T.	17	0	0	13	12	6	sw.	Orville Hoksche.
Leeds	Benson	1,515	4	48.0	.....	79	5	15	21	0.00	.....	0	.....	0	0	22	7	2	w.	John Dilmage.
Linton	Emmons	1,711	27	50.4	+4.9	82	27	20	10	0.70	-0.34	0.60	17	0	3	22	6	3	se.	Wm. Heyerman.	
Maddock, 1 mile E	Benson	1,604	29	47.8	+4.3	78	4	13	21	0.00	-0.98	0	.....	0	0	18	13	0	sw.	A. T. Felland.
Mandan, 1 1/2 miles SW	Morton	1,750	30	49.8	+5.1	82	27	21	21	0.14	-0.76	0.07	1	0	3	21	7	3	sw.	No. Gt. Plains Field. Sta.	
Max	McLean	2,093	15	49.8	+6.9	79	27	21	10	0.15	-0.65	0.15	1	0	1	18	5	8	se.	A. W. Rice.	
McClusky	Sheridan</																				

Climatological Data for October 1944-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Eppling	Williams	2,224	33	50.2	+8.1	78	4	20	1†	0.00	—0.77	0	.....	0	0	28	3	0	se.	T. Beachler.
Fairfield, 94 miles N.	Billings	2,650	7	.....	.....	.....	.....	.....	.....	0.00	—0.84	0	.....	0	0	26	4	1	sw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	50.1	.....	77	31	25	21	0.04	—0.93	0.04	1	T.	1	25	5	1	sw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	47.7	+3.2	76	4	20	11†	0.02	—0.88	0.02	1	T.	1	15	11	5	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35	50.4	+8.3	80	12	13	1	0.00	—0.79	0	.....	0	0	29	2	0	se.	L. D. Nielson.
Halliday	Dunn	2,073	3	.....	.....	.....	.....	.....	.....	0.00	.....	.....	.....	0	0	28	2	1	nw.	John Kisse.
Hettinger	Adams	2,675	36	.....	.....	81	27	.....	.....	T.	—0.71	T.	1†	0	0	25	6	0	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	49.5	+6.0	78	4	20	1†	0.00	—0.96	0	.....	0	0	24	6	1	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	48.6	+2.6	76	27	20	11	0.04	—0.75	0.02	1†	0.2	2	20	8	3	nw.	S. P. Grane.
Medora	Billings	2,271	28	50.4	.....	78	13†	21	11	T.	—0.78	T.	1	0	0	27	3	1	w.	Harry Roberts.
Mott	Hettinger	2,424	36	49.7	+5.3	83	27	21	10	0.06	—0.77	0.06	1-2	0	1	25	4	2	nw.	P. G. Wick.
New England	Hettinger	2,621	49	48.4	+4.3	84	27	23	10†	0.10	—0.69	0.10	2	0.1	1	21	7	3	se.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	.....	3	48.4	.....	74	5†	24	10†	0.01	—0.74	0.01	2	0	1	27	3	1	s.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	47.8	+3.4	77	4†	17	1	0.02	—0.74	0.01	6	0	1	17	14	0	sw.	C. E. Shubert.
Portal	Burke	1,954	38	48.7	+7.2	78	4	17	1	0.00	—0.84	0	.....	0	0	25	4	2	sw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	48.6	+4.1	76	15†	14	1	0.00	—1.05	0	.....	0	0	20	11	0	se.	E. J. Lewis.
Richardton, 14 miles N.	Stark	2,467	27	50.6	+6.0	78	27	24	1	0.01	—0.78	0.01	2	0.1	1	18	10	3	w.	Assumption Abbey.
Ryder	Ward	2,108	15	.....	.....	.....	.....	.....	.....	0.00	—0.80	0	.....	0	0	26	4	1	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	47.4	+3.2	79	4†	17	1†	0.00	—0.77	0	.....	0	0	22	8	1	.....	H. J. Bugge.
Stanley	Mountrail	2,258	6	47.2	.....	77	4†	13	1	0.00	.....	0	.....	0	0	21	10	0	w.	Leroy Edwards.
Tagus	Mountrail	2,179	15	.....	.....	.....	.....	.....	.....	T.	—0.78	T	16	0	0	20	10	1	sw.	Mrs. G. E. Vogt.
Tioga	Williams	2,279	15	.....	.....	.....	.....	.....	.....	0.00	—0.81	0	.....	0	0	14	14	3	w.	Morris J. Pederson.
Trotters	Golden Valley	.....	18	.....	.....	.....	.....	.....	.....	T.	—0.80	T.	25	0	0	16	15	0	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	48.8	.....	83	15	18	1†	0.00	.....	0	.....	0	0	23	8	9	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	50.6	+6.4	79	15	22	21	0.00	—0.87	0	.....	0	0	25	6	0	sw.	J. C. Zeller.
Wildrose	Williams	2,258	16	.....	.....	.....	.....	.....	.....	T.	—0.80	T.	6†	0	0	30	1	0	sw.	Jonathan Winkjer.
Williston	Williams	1,878	64	50.8	+7.4	77	27	20	1	T.	—0.86	T.	5†	0	0	15	12	4	se.	U. S. Weather Bureau.
Average for Western Division				49.2	+5.2	84	27	12	1	0.02	—0.79	0.15	1	T.	1	23	7	1	sw.	
Average for the State				48.7	+4.5	84	27	11	21	0.12	—0.87	1.20	5	T.	1	21	8	2	sw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for October 1944

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum...	39	42	62	72	71	64	64	57	54	57	61	75	71	63	68	74	73	49	56	60	51	68	63	75	62	70	77	62	68	73	76	63.8
	Minimum...	29	32	38	38	45	45	29	25	24	23	27	35	29	30	31	40	48	26	21	23	19	33	33	39	26	34	36	34	30	33	33	31.9
Bismarck Airport	Maximum...	42	47	69	77	78	65	67	60	52	56	66	77	71	66	69	77	75	59	60	58	54	74	60	74	66	70	82	65	70	74	75	66.3
	Minimum...	33	35	35	40	39	47	38	32	29	26	23	33	32	34	43	40	56	29	25	26	21	37	40	40	31	29	33	31	30	33	31	33.9
Bottineau	Maximum...	42	53	67	77	76	61	63	55	55	51	66	72	69	72	74	73	71	50	60	53	59	57	52	64	60	65	73	68	67	65	63	63.0
	Minimum...	28	24	32	37	40	36	33	28	34	27	20	35	37	38	37	36	39	32	23	30	18	32	31	32	21	25	34	32	32	34	33	31.3
Carson	Maximum...	41	51	70	80	80	64	69	64	55	71	65	78	78	70	68	75	73	59	58	60	55	73	65	74	65	72	82	66	71	75	75	67.8
	Minimum...	28	31	31	41	41	45	32	36	30	22	21	33	31	36	42	45	49	33	27	27	25	34	42	41	31	32	39	33	38	38	36	34.5
Crosby	Maximum...	47	57	75	78	73	64	68	65	51	56	68	75	71	69	76	72	71	60	66	54	58	68	56	61	65	70	75	69	69	69	71	66.0
	Minimum...	12	24	35	46	44	43	30	30	30	22	24	34	29	32	37	42	41	27	27	29	21	33	31	39	22	28	38	38	32	29	37	31.8
Devils Lake	Maximum...	44	53	65	75	76	62	62	48	54	48	63	74	66	57	74	73	74	52	58	51	52	66	50	65	57	67	78	49	71	73	71	62.2
	Minimum...	31	32	38	48	46	45	35	28	26	28	30	40	35	32	37	41	52	31	29	27	19	32	36	36	26	32	42	32	30	40	32	34.5
Dickinson Airport	Maximum...	40	56	72	72	75	61	66	64	47	57	65	74	74	70	66	69	70	53	64	55	55	69	64	70	64	71	77	67	73	72	75	65.4
	Minimum...	27	31	34	45	42	40	36	36	30	26	27	36	34	34	43	46	30	30	32	27	35	42	36	38	32	43	35	34	36	45	35.6	
Dunn Center	Maximum...	41	56	73	76	76	62	67	65	50	56	64	77	73	70	76	71	73	60	65	58	56	69	63	67	65	70	75	66	72	70	76	66.4
	Minimum...	22	27	30	43	31	45	31	25	25	21	22	32	28	26	37	37	38	28	22	27	18	26	43	37	28	31	26	22	25	29	29.2	
Fargo Airport	Maximum...	44	57	66	69	67	64	60	46	52	50	63	75	65	61	66	71	78	59	55	57	54	66	56	71	58	63	75	55	65	65	62	61.1
	Minimum...	34	38	42	46	44	48	37	34	25	25	41	37	35	31	37	34	52	29	22	22	33	32	31	29	29	37	30	26	41	30	34.5	
Fessenden	Maximum...	45	49	62	81	78	69	66	54	57	50	64	78	70	66	73	77	72	65	59	54	55	70	52	65	63	70	71	61	73	75	74	65.1
	Minimum...	27	33	32	46	42	46	37	26	32	25	24	39	31	29	39	54	34	25	26	18	30	40	35	25	32	48	28	31	39	36	33.8	
Fullerton	Maximum...	44	57	68	68	64	63	50	52	57	62	76	68	62	65	72	74	64	54	58	50	66	63	75	60	69	78	65	68	67	71	63.0	
	Minimum...	33	36	42	45	49	46	40	28	26	25	32	36	34	31	30	38	49	41	23	27	22	29	46	35	28	34	30	34	27	37	34.4	
Garrison	Maximum...	43	53	72	77	79	68	67	62	53	54	65	77	73	67	72	74	74	52	62	56	55	69	59	66	65	69	78	63	68	72	77	65.8
	Minimum...	29	30	32	42	37	46	36	30	28	21	24	35	34	36	38	40	49	52	26	28	20	32	41	36	27	25	37	36	30	34	33	32.9
Golva	Maximum...	37	59	74	76	67	61	66	67	54	57	66	74	75	73	70	69	69	49	58	58	60	71	66	70	66	72	75	70	75	71	73	66.5
	Minimum...	28	27	32	40	31	34	27	23	25	22	20	31	26	25	39	40	41	24	23	23	23	28	38	31	32	24	34	24	20	26	34	28.9
Grafton	Maximum...	44	54	62	73	70	67	57	55	54	52	64	76	72	58	73	73	76	72	58	56	53	63	61	68	61	66	78	71	65	67	59	63.8
	Minimum...	30	28	40	43	45	41	36	27	27	36	39	37	33	32	35	48	37															
Grand Forks Airport	Maximum...	45	51	58	65	67	59	57	45	52	47	63	73	63	58	69	70	75	54	57	56	51	64	49	67	56	67	56	67	56	49	59.4	
	Minimum...	32	32	42	45	50	45	34	30	24	25	35	38	33	29	34	35	49	26	23	25	19	29	29	27	29	28	27	33	25	24	36	28.0
Jamestown Airport	Maximum...	41	45	64	75	73	63	63	50	55	54	63	77	69	62	70	72	74	57	58	58	52	69	59	73	62	68	80	58	70	73	76	64.0
	Minimum...	31	46	42	41	47	44	34	30	28	26	30	37	33	31	34	37	54	24	19	17	19	30	30	32	28	33	32	30	25	34	29	32.5
Kenmare/	Maximum...	45	60	72	78	76	64	67	60	52	57	67	75	71	67	77	72	74	56	64	55	56	70	57	62	65	73	76	64	70	73	74	66.1
	Minimum...	20	20	34	43	50	45	40	32	33	30	30	31	32	32	32	45	45	28	22	26	20	20	36	35	31	40	40	33	33	35	37	32.9
Langdon	Maximum...	45	52	65	75	74	64	62	45	54	50	62	75	68	55	71	70	73	65	57	55	50	59	57	65	58	65	77	63	68	70	60	62.1
	Minimum...	26	25	35	43	42	42	35	28	22	25	29	32	32	30	37	38	52	33	24	29	18	32	32	29	25	25	33	21	26	36	23	31.3
Marmarth	Maximum...	38	58	74	75	70	63	67	68	61	59	67	75	75	74	71	70	70	61	69	60	68	71	68	72	65	72	76	70	73	74	74	67.7
	Minimum...	30	28	31	40	32	41	41	25	33	24	20	23	23	26	40	40	40	33	25	24	28	29	41	36	28	22	27	21	21	26	29.6	
Minot Airport	Maximum...	42	55	72	76	76	64	64	57	52	54	66	77	67	66	74	71	74	48	63	53	54	67	55	63	64	70	77	55	69	71	76	64.3
	Minimum...	28	31	34	49	47	45	36	33	31	27	30	40	33	33	47	48	47	34	33	29	26	36	38	37	29	33	45	36	35	42	39	36.5
Mott	Maximum...	42	55	72	76	78	65	68	65	56	58	67	77	76	72	69	72	72	63	62	58	56	73	67	73	65	72	83	70	73	76	76	68.0
	Minimum...	30	32	32	39	34	45	32	28	30	21	23	27	30	30	43	43	47	35	22	25	23	21	37	40	35	26	31	27	28	27	30	31.4
Pembina Airport	Maximum...	45	53	62	72	68	54	51	45	51	49	64	71	57	57	72	71	75	51	58	49	51	60	41	64	55	62	76	46	63	70	39	58.1
	Minimum...	25	27	35	44	47	45	36	32	25	29	35	44	33	33	33	36	49	27	22	28	22	28	30	29	31	28	32	27	25	32	32	32.3
Sharon	Maximum...	42	50	61	65	70	60	60	49	50	51	62	74	65	57	68	70	75	63	55	50	50	62	55	66	57	67	76	59	70	71	64	61.1
	Minimum...	30	32	40	45	48	43	40	33	28	25	30	35	37	33	40	37	55	35	20	26	20	33	35	32	24	26	34	33	27	39	39	34.0
Steele	Maximum...	39	46	62	71	75	61	63	52	53	59	56	75	69	66	71	76	74	62	56	56	54	68	58	71	66	69	78	63	71	72	74	64.0
	Minimum...	28	32	32	38	42	44	33	28	29	21	20	27	30	32	38	38	51	35	20	23	15	33	34	32	31	26	33	30	25	33	29	31.0
Valley City	Maximum...	43	45	60	70	70	69	63	60	51	53	63	75	76	65	68	71	75	65	57	55	55	65	63	77	70	66	79	62	73	72	70	64.7
	Minimum...	33	37	40	45	50	48	41	32	28	24	32	36	38	37	33	38	53	39	20	25	19	29	34	31	29	33	29	38	26	35	27	34.2
Wahpeton	Maximum...	47	45	55	67	71	70	62	54	55	56	61	75	74	66	67	72	78	57	62	56	69	62	75	66								

Daily Precipitation for October 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James	.30					.03												T.													0.33	
Casselton	Red						.10				T.																					0.10	
Cooperstown	Sheyenne																															0.00	
Courtenay	James																	T.														T.	
Devils Lake ^{1 5}	Devils Lake	T.	.10				T.				.01																					0.01	
Edgeley	James																															0.10	
Edmore	Devils Lake						T.		.01		T.																					0.01	
Ellendale	James	.22				.32														.13												0.67	
Fargo ^{1 5}	Red	T.				.15	.01				.01																					0.17	
Forman	Sheyenne	.18				.70																										0.88	
Fullerton	James	.13	T.			.44	.02													.04												0.63	
Gackle	do																																
Grafton	Red					.20					T.																					0.20	
Grand Forks Airport ³	do					.07					.02																					0.09	
Hankinson ²	do	.32	.07			.21	T.					.04																				0.64	
Hannah	Pembina																							T.								T.	
Hillsboro	Red					.08					T.														T.							0.08	
Jamestown Airport ³	James						T.												.09													0.09	
Langdon	Pembina						.10			.05																						0.15	
Larimore	Red											.15																				0.15	
Lisbon	Sheyenne	.04				.45	T.													.04												0.53	
Mayville	Red					T.					T.																					T.	
McHenry	James						.03																									0.03	
McLeod	Sheyenne																		.40													0.40	
Oakes ²	James	.21				.52																										0.73	
Park River	Red																															0.00	
Pembina Airport ³	do					.91					.03										.01										T.	0.95	
Petersburg	do					.03																										0.03	
Sharon	do					.02													T.													0.02	
Valley City	Sheyenne					.04																										0.04	
Wahpeton	Red	.12				.18					.01								T.													0.31	
Middle Division																																	
Ashley ³	Missouri	.04	.11				T.												.04	T.												0.19	
Bisbee	Devils Lake																															T.	
Bismarck ^{1 5}	Missouri	T.	.05			T.													.03													0.08	
Bottineau ²	Mouse							.04																								0.04	
Butte	do																															0.00	
Carson	Heart																		.09	.45												0.54	
Center	Missouri																															0.00	
Drake ²	Mouse	.17																														0.17	
Dunseith	do					.08																										0.08	
Eckman	do																															0.00	
Fessenden	James																															0.00	
Fort Yates	Missouri		T.																.45													0.45	
Foxholm	Mouse																															0.00	
Garrison ³	Missouri																															0.00	
Granville	Mouse																															0.00	
Hansboro	Devils Lake					.08																										0.08	
Linton	Missouri	.10																	.30	.30												0.70	
Maddock	Sheyenne																															0.00	
Mandan ²	Missouri	.07	.04																T.	.03												0.14	
Max ²	do	.15																														0.15	
McClusky	do																															0.00	
Minot Airport ³	Mouse						T.																									T.	
Mohall	do																															0.00	
Napoleon ²	Missouri	.03																	.19													0.22	
New Salem	Heart	.11																														0.11	
Pettibone	James																															0.00	
Rolla	Devils Lake					.04																										0.04	
Rugby	Mouse								T.																							T.	
Selfridge	Missouri																		.25													0.25	
Steele	do																		T.													T.	
Towner	Mouse																															0.00	
Turtle Lake	Missouri																															0.00	
Tuttle	do	.05	T.																													0.05	
Underwood	do																															0.00	
Velva	Mouse																															0.00	
Washburn	Missouri																															0.00	
Westhope	Mouse					T.	T.																										

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UNNT
1.53"

Nat'l Hist

JAN 3 1945

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIII BISMARCK, N. D., NOVEMBER 1944 No. 11

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

More precipitation occurred during November 1944 than in any previous November since statewide records began in 1892. This moisture was in the form of rain and, following a dry October, was of great value to farm land. The precipitation was fairly well distributed throughout the month and throughout the state, but with the greatest amounts in the southern and eastern counties and the least amounts in the northwestern counties. Snowfall was quite heavy in the Heart River Valley. There were more foggy days and fewer days with sunshine than in any previous month of record. The temperature averaged slightly above normal. It was somewhat warmer in the eastern section than in the middle and western sections. A snow and glaze storm occurred at most places on the 13-14th. The stormy weather interfered with farm work but most of the harvesting was completed during October. Considerable feeding of livestock was necessary due to the snow cover, but livestock generally were in good condition. Side roads were snow blocked or muddy much of the month and most of them will be very rough all winter.

TEMPERATURE

The mean temperature for the state was 27.1°, or 0.3° above the 1892-1944 average for November. The mean temperature for the eastern division was 30.2°; for the middle division, 26.0°; and for the western division, 24.9°. The highest mean temperature was 34.6° at McLeod and Wahpeton, and the lowest, 21.8° at Dickinson, making a range in mean temperature of 12.8°. The absolute range was 91°, from 70° at four stations, to -21° at Stanley. The average daily excess in temperature for the state since January 1, 1944, is 1.3°.

PRECIPITATION

The average precipitation for the state was 2.25 inches, or 1.64 inches more than the 1892-1944 average for November. In the eastern division the average amount was 2.58 inches; the middle division, 2.36 inches; and in the western division, 1.82 inches. The greatest monthly amount reported was 6.11 inches at Richardton; the least was 0.28 inch at Bottineau. The greatest amount recorded in any 24 consecutive hours was 2.59 inches at Grafton and Park River on the 13-14th. The accumulated excess in precipitation for the state since January 1, 1944, is 4.69 inches. The average snowfall was 8.8 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	8	9	4	9	24	66	54	32	42	36	61	28	38	14	16	38	50	29	41	36	23	8	2	1	6	4	4	4	1	16	..
Lunar halos .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Solar halos .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sleet	2	14	..	1	..	..	..	1	2	..	1	2	1	9	11	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thundrsts. ....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.61	30	29.49	13	11.2	33	nw.	21	88	90	82	88	20	1155
Devils Lake	30.59	30	29.54	1	9.6	27	ne.	14	93	93	89	93	14	1146
Fargo	30.58	30	29.45	13	11.9	34	n.	29	93	93	87	90	12	965
Williston	30.63	29	29.46	24	7.3	25	nw.	21	87	90	88	84	32	1181

† And other dates.

COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	22.3	75	-26	0.80	0.95	0.61	0.79	7.4	4	8	9	13	
1893...	22.4	74	-27	0.72	0.75	0.24	0.57	4.6	3	9	10	11	
1894...	23.1	71	-25	0.44	0.54	0.43	0.47	2.6	4	10	8	12	
1895...	20.6	76	-25	1.18	1.01	1.08	1.09	8.2	5	8	9	13	
1896...	8.1	62	-32	2.06	2.47	2.17	2.23	21.7	9	8	7	15	
1897...	20.0	86	-28	0.27	0.33	0.36	0.32	2.8	3	12	9	9	
1898...	23.0	69	-30	0.42	0.30	0.30	0.34	3.1	3	13	8	9	
1899...	36.0	68	2	0.26	0.51	0.16	0.31	1.0	2	15	4	11	
1900...	20.4	64	-29	0.28	0.29	0.40	0.32	5.2	5	14	7	9	
1901...	26.8	70	-7	0.10	0.09	0.19	0.13	1.6	1	15	8	7	
1902...	29.6	69	-12	0.25	0.11	0.36	0.24	1.9	3	11	6	13	
1903...	25.3	78	-20	0.27	0.22	0.28	0.26	2.5	2	13	4	12	
1904...	35.7	80	-10	0.10	0.09	0.07	0.09	0.7	1	18	5	7	
1905...	31.6	88	-38	1.66	1.54	0.89	1.36	11.0	9	7	13	10	
1906...	23.8	68	-16	1.90	1.34	1.23	1.49	10.2	7	10	7	13	
1907...	30.2	85	-15	0.08	0.10	0.05	0.08	0.7	1	16	8	6	
1908...	31.1	75	-15	1.10	0.91	0.80	0.94	8.2	4	12	8	10	
1909...	29.4	88	-23	0.68	0.31	0.44	0.48	4.6	3	11	9	10	
1910...	23.9	68	-23	0.34	0.44	0.43	0.40	3.2	2	8	10	12	
1911...	16.7	58	-33	0.70	0.60	0.63	0.64	7.1	6	12	8	10	
1912...	31.8	70	1	0.09	0.06	0.06	0.07	0.5	1	14	9	7	
1913...	34.1	77	-2	0.21	0.23	0.21	0.22	1.6	2	15	8	7	
1914...	30.7	83	-30	0.45	0.31	0.23	0.33	2.6	2	13	10	7	
1915...	28.1	71	-10	0.81	0.83	1.21	0.95	3.7	4	10	10	10	
1916...	28.8	75	-18	0.10	0.25	0.46	0.27	1.7	2	16	8	6	
1917...	36.8	77	-7	0.20	0.13	0.05	0.13	1.4	1	16	6	8	
1918...	28.9	71	-18	1.31	1.09	0.49	0.96	5.3	4	13	6	11	
1919...	15.6	57	-36	1.88	0.96	0.62	1.15	11.8	5	11	8	11	
1920...	28.0	65	-14	0.55	0.33	0.14	0.34	2.1	3	10	9	11	
1921...	21.0	69	-30	0.52	0.71	0.83	0.69	6.3	5	7	8	15	
1922...	31.8	65	-8	2.97	2.26	1.50	2.24	6.3	6	7	7	16	
1923...	36.5	72	-5	0.58	0.45	0.39	0.47	0.6	3	13	8	9	
1924...	27.6	69	-15	0.19	0.17	0.17	0.18	1.9	2	11	9	10	
1925...	28.8	69	-17	0.42	0.17	0.13	0.24	1.3	2	14	8	8	
1926...	21.5	68	-23	0.72	0.54	0.60	0.62	6.2	5	6	7	17	
1927...	20.7	59	-24	0.71	0.72	0.65	0.69	7.1	6	7	8	15	
1928...	31.0	70	-11	1.08	0.28	0.09	0.48	0.2	1	15	8	7	
1929...	24.8	70	-21	0.57	0.46	0.56	0.53	5.2	5	9	8	13	
1930...	29.4	72	-21	1.56	0.62	0.43	0.87	6.2	5	13	7	10	
1931...	30.3	78	-10	0.98	0.40	0.27	0.55	5.0	3	13	7	10	
1932...	25.2	70	-17	0.70	0.38	0.45	0.51	4.6	4	10	10	10	
1933...	28.3	78	-15	0.81	0.58	0.56	0.65	6.6	5	9	8	13	
1934...	33.9	73	-1	0.51	0.22	0.10	0.28	1.0	3	13	7	10	
1935...	17.2	57	-25	0.70	0.79	0.69	0.73	8.1	6	8	8	14	
1936...	28.0	69	-28	0.37	0.33	0.31	0.34	4.0	4	13	8	9	
1937...	25.2	73	-25	0.51	0.40	0.33	0.41	3.5	4	10	7	13	
1938...	23.8	75	-21	0.63	0.94	1.04	0.87	7.9	6	8	10	12	
1939...	34.9	74	-4	0.04	0.02	0.02	0.03	T.	1	19	6	5	
1940...	22.0	59	-28	0.62	0.62	0.53	0.59	7.1	6	8	8	14	
1941...	30.5	69	-17	0.26	0.48	0.46	0.40	3.6	5	9	8	13	
1942...	28.0	73	-14	0.22	0.13	0.18	0.18	1.5	3	10	10	10	
1943...	28.7	63	-4	0.52	0.38	0.43	0.44	4.2	4	8	8	14	
1944...	27.1	70	-21	2.58	2.36	1.82	2.25	8.8	9	5	5	20	
Period	26.8	88	-38	0.72	0.59	0.51	0.61	4.6	4	11	8	11	

Climatological Data for November 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer			
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With 0.1 in. or more precip.	Clear	Pt. cloudy	Cloudy					
Eastern Division																							
Carrington	Foster	1,579	46	27.5	+0.2	55	1	-10	30	2.52	+1.97	0.70	7-8	7.5	9	6	5	19	nw.	Soo Line Agent.			
Casselton	Cass	934	48	33.8	+6.8	62	1	-4	30	2.83	+2.15	0.90	14	6.2	10	2	3	25	n.	C. Hayford.			
Cavalier	Pembina	894	34	30.2		46	1	9	30	4.92	+4.18	2.03	13-14	6.2	14	3	2	25	n.	City Light & Power Co.			
Colgate	Steele	1,180	11							3.12	+2.45	1.15	14	4.0	6	4	15	11	ne.	O. M. Jensen.			
Cooperstown	Griggs	1,428	47	30.4	+3.1	64	1	-1	30	2.19	+1.55	0.50	14	4.6	9	2	1	27	nw.	R. J. Lockner			
Courtenay	Stutsman	1,523	14							2.08	+1.51	0.58	7	6.0	9	3	4	23	sw.	G. H. Hanawalt.			
Devils Lake	Ramsey	1,478	47	26.8	+2.3	57	1	-2	30	2.36	+1.64	1.02	13-14	9.3	13	2	4	24	n.	U. S. Weather Bureau.			
Edgeley, 2 miles S.	LaMoure	1,568	43	30.4	+1.1	70	1	-3	30	2.26	+1.74	0.82	7	3.6	8	3	3	24	nw.	N. Dak. Agri. Exp. Sta.			
Edmore, 1 1/2 miles W.	Ramsey	1,524	20	25.8	+1.2	56	1	-2	29 1/2	2.25	+1.63	0.68	3	7.0	9	3	2	25	ne.	Mike Davis.			
Ellendale	Dickey	1,457	49	31.0	+2.6	62	1	-3	30	2.29	+1.73	0.82	7	1.4	10	2	2	26	nw.	J. E. Demmer.			
Fargo Airport, 2 1/2 mi. NNW	Cass	895	17	32.9	+5.8	63	1	-1	30	1.85	+0.95	0.60	7-8	5.3	12	2	2	26	n.	U. S. Weather Bureau.			
Forman	Sargent	1,249	51	32.8	+4.2	70	1	0	30	1.78	+1.21	0.55	7	1.0	10	5	1	24	.....	Helge Dyste.		
Fullerton	Dickey	1,439	46	31.7	+2.7	61	1	-2	30	2.37	+1.66	1.18	7-8	4.8	10	2	2	26	n.	F. O. Alin.			
Gackle	Logan	1,951	14																	Jack Dixon.			
Grafton	Walsh	827	52	30.4	+5.4	54	1	8	30	3.89	+3.20	2.59	13-14	3.0	12	1	4	25	nw.	Dr. J. C. Lamont.			
Grand Forks, 2 miles W.	Grand Forks	830	53	30.6	+4.8	58	1	2	30	2.99	+2.20	1.47	13-14	7.4	14	3	7	20	nw.	University of N. Dak.			
Grand Forks Aprt. 2 1/2 mi. W	Grand Forks	832	4	30.2		57	1	0	30	2.39		1.46	13-14	3.4	14	3	3	24	n.	U. S. Airway Comm. Sta.			
Hankinson	Richland	1,068	15	31.8	+2.9	65	1	5	30	1.39	+0.74	0.74	8	4.5	9	12	3	15	nw.	Soo Line Agent.			
Hannah	Cavalier	1,568	52	26.6	+5.9	58	1	-2	30	2.26	+1.57	0.85	7-8	11.1	5	3	4	23	nw.	A. E. Prior.			
Hillsboro	Trail	901	44	32.2	+4.9	60	1	4	30	2.68	+1.92	1.32	13-14	5.9	12	3	2	25	n.	Alfred Jahnke.			
Jamestown, 2 miles SE	Stutsman	1,457	52	30.3	+3.0	66	1	-3	30	2.65	+1.98	0.67	7 1/2	7.1	8	5	1	24	nw.	N. Dak. State Hospital.			
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	4	29.2		64	1	-7	30	2.27		0.67	7-8	4.7	14	2	5	23	nw.	U. S. Airway Comm. Sta.			
Kensal, 7 miles SW	Stutsman	1,440	5	28.5		65	1	-11	30	3.22		0.82	1-2	10.2	12	4	2	24	ne.	U. S. Wildlife Refuge.			
Langdon, 1 mile E	Cavalier	1,615	48	26.4	+2.7	60	1	1	30	3.64	+2.91	1.08	7-8	11.1	18	3	3	24	nw.	V. Sturlaugson.			
Larimore	Grand Forks	1,134	51	28.0	+2.2	59	1	4	30	2.73	+1.91	1.72	14	4.8	7	2	3	25	.....	Chas. Ouradnik.		
Lisbon	Ransom	1,091	40	33.0	+4.2	63	1	0	30	1.79	+1.16	0.54	8	6.5	13	3	0	27	nw.	J. O. Halverson.			
Mayville	Trail	1,975	48	31.8	+4.0	65	1	4	30	2.72	+2.01	1.24	13-14	5.6	14	3	3	24	nw.	H. A. Ragaz.			
McHenry, 3 miles NE	Eddy	1,509	22	27.2	+0.6	60	1	-1	30	2.49	+1.95	0.85	14-15	5.0	13	4	2	24	n.	C. E. Blasky.			
McLeod, 3 miles E.	Richland	1,075	33	34.6	+4.9	62	1	3	30	2.55	+1.92	0.82	7	11.2	7	5	4	21	nw.	J. G. Carlson.			
McVille	Nelson	1,467	14							2.29		0.72	14	17.7	11	1	5	24	ne.	A. M. Casad.			
Milnor	Sargent	1,117	5	30.8		61	1	-1	30	2.65	+2.03	1.02	14	5.8	8	4	4	22	nw.	E. W. Wilson.			
Oakes	Dickey	1,318	15	32.6	+4.0	63	1	-1	30	1.76	+1.20	0.68	6-7	2.5	8	2	1	27	nw.	F. H. Murray.			
Park River	Walsh	998	40	26.2	-0.8	46	1	3	30	3.72	+3.09	2.59	13-14	12.0	10	2	2	26	n.	Martin Severson.			
Pembina Airport, 1 mile S.	Pembina	803	70	28.8	+5.4	46	1	3	30	2.94	+2.19	1.46	13-14	6.6	14	1	4	25	nw.	U. S. Airway Comm. Sta.			
Petersburg	Nelson	1,524	14	29.0		58	1	5	29 1/2	2.21	+1.57	1.18	13	3.3	9	1	7	22	nw.	T. M. Rykken.			
Sharon	Steele	1,516	20	29.0	+4.3	48	1	0	30	2.40	+1.68	0.74	13-14	4.9	14	1	4	25	n.	Nels O. Grefshelm.			
Valley City	Barnes	1,229	38	31.8	+3.8	65	1	3	30	2.86	+2.23	0.80	28	4.1	16	4	4	22	n.	I. C. Robertson.			
Wahpeton	Richland	962	52	34.6	+5.6	70	1	2	30	2.00	+1.31	0.96	13-14	3.0	10	2	2	26	nw.	W. J. Cavanaugh.			
Average for Eastern Division						30.2		+3.4	70	1	-11	30	2.58	+1.86	2.59	13-14	6.1	11	3	8	24	nw.	
Middle Division																							
Ashley, 1 mile SE	McIntosh	2,014	48	28.2	+0.2	67	1	-11	30	2.44	+1.89	1.30	7-8	8.5	11	3	1	26	n.	U. S. Airway Comm. Sta.			
Bisbee	Towner	1,601	41	27.9	+1.5	67	1	-5	30	3.60	+3.13	2.47	7	14.0	7	3	3	24	nw.	Robert L. Peterson.			
Bismarck	Burleigh	1,670	70	26.6	-1.9	63	1	-7	30	2.58	+2.10	0.89	1-2	9.3	7	2	4	24	nw.	U. S. Weather Bureau.			
Bismarck Airt. 2 1/2 mi. SE.	Burleigh	1,650	5	26.5	0.0	64	1	-9	30	2.56	+1.99	0.99	1-2	7.7	9	2	4	24	nw.	U. S. Weather Bureau.			
Bottineau	Bottineau	1,638	52	24.8	+1.2	54	1	-9	30	0.28	-0.19	0.13	28	2.8	3	4	4	22	nw.	N. D. School of Forestry			
Butte, 3 miles WSW.	McLean	1,880	18	26.0	-0.5	59	1	-4	30	4.37	+3.77	1.64	13-14	21.5	6	3	6	21	nw.	R. L. Williams.			
Carson, 2 1/2 miles SW	Grant	2,500	32	25.8	-4.0	54 1/2	1	-9	30	2.76	+2.19	1.16	7	10.9	6	8	6	16	nw.	J. W. Evans.			
Center	Oliver	2,100	6	26.1		65	1	-8	30	4.71		1.48	13-14	27.7	11	1	13	16	nw.	Fred L. Heinz.			
Drake	McHenry	1,634	15	24.3	-1.6	55	1	-10	30	2.92	+2.38	0.92	7	14.5	7	4	3	23	nw.	H. G. Kringen.			
Dunsmuir, 2 miles NNE	Rolette	1,682	48	26.4	+2.3	59	1	-4	30	0.64	+0.14	0.51	2	5.1	6	3	9	18	ne.	Hubert Downs.			
Eckman	Bottineau	1,500	39	25.8	+0.4	58	1	-17	30	1.07	+0.58	0.92	13-14	2.9	5	2	6	22	nw.	E. R. Sherman.			
Fessenden	Wells	1,610	32	25.8	-0.8	60	1	-10	30	2.29	+1.69	0.50	14	9.5	6	6	14	10	n.	John V. Zuber.			
Fort Yates	Sioux	1,670	44	29.1	+0.9	68	1	-11	30	2.87	+2.42	1.12	7	2.0	5	9	4	17	nw.	P. J. Jacobson.			
Foxholm, 6 1/2 miles NE.	Ward	1,657	23	26.2	+0.6	50	1	-14	30	1.69	+1.01	1.20	13-14	4.6	6	9	6	15	nw.	U. S. Wildlife Refuge.			
Garrison	McLean	1,911	67	25.3	-1.2	58	1	-9	29 1/2	2.83	+2.34	1.14	7-8	15.9	11	3	6	21	n.	Mae H. Vorachek.			
Granville	McHenry	1,504	37	27.1	+0.7	61	1	-10	30	1.65	+1.11	0.51	7-8	7.0	10	7	7	16	n.	Fred Roble.			
Hansboro	Towner	1,597	36	26.5	+3.0	48	1	-5	30	1.69	+1.15	0.86	7	8.7	10	4	2	24	nw.	W. E. Disher.			
Harvey	Wells	1,596	41							2.98	+2.40	0.69	2	18.2	8	3	3	24	n.	Orville Hokscho.			
Leeds	Benson	1,515	4	25.4		70	1	-12	30	2.03		0.55	8	16.0	9	3	7	20	n.	John Dulmage.			
Linton	Emmons	1,711	27	29.4	+0.6	65	1	-12	30	3.35	+2.90	0.96	2	4.9	10	4	1	25	nw.	Wm. Heyerman.			
Maddock, 1 mile E	Benson	1,604	29	25.1	-1.1	60	1	-12	30	2.34	+1.83	0.73	13-14	10.9	9	3	3	24	nw.	A. T. Feiland.			
Mandan, 1 1/2 miles SW	Morton	1,750	30	25.5	-3.4	64	1	-8	30	3.44	+2.92	1.29	13-14	10.4	8	5	2	23	nw.	No. Gt. Plains Field Sta.			
Max	McLean	2,093	15	24.4	-1.3	57	1	-11	30	1.89	+1.39	0.67	7-8	10.5									

Climatological Data for November 1944—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Epping	Williams	2,224	33	25.1	−1.2	57	1	−14	29	0.41	−0.02	0.20	14	1.9	5	7	6	17	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	7	.....	.....	.....	.....	.....	.....	2.68	+2.23	1.47	1-2	11.0	6	9	6	15	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	24.7	.....	64	1	−10	30	3.51	+3.03	1.61	1-2	19.3	9	6	9	15	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	23.2	−7.5	59	1	−10	29†	1.20	+0.74	0.54	1-2	15.3	6	6	9	15	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35	25.4	−0.7	67	1	−15	29	1.12	+0.57	0.90	2-3	3.5	4	12	6	12	se.	L. D. Nielsen.
Halliday	Dunn	2,073	3	.....	.....	.....	.....	.....	.....	2.95	.....	0.77	7-8	19.1	5	13	6	11	se.	John Kisse.
Hettinger	Adams	2,675	36	.....	.....	.....	.....	.....	.....	1.34	+0.94	0.80	7-8	5.0	5	12	6	12	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	26.2	−0.1	56	6	−11	30	0.62	+0.08	0.42	13-14	5.0	7	10	5	15	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	26.0	−4.9	58	1	−5	29†	1.41	+1.04	0.68	1-2	12.0	5	9	7	14	nw.	S. P. Grane.
Medora	Billings	2,271	28	26.0	.....	68	1	−10	30	2.66	+2.18	1.20	1-2	16.0	6	12	3	15	w.	Harry Roberts.
Mott	Hettinger	2,424	36	26.2	−3.1	62	1	−8	30	2.00	+1.54	0.81	7-8	12.0	6	13	3	14	nw.	P. G. Wick.
New England	Hettinger	2,621	49	25.4	−4.0	58	1	−12	30	2.76	+2.31	1.32	13-14	13.0	5	9	8	13	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	.....	3	23.7	.....	57	1	−10	30	3.81	.....	1.23	1-2	20.9	8	13	1	16	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	25.4	−0.1	55	1	−18	30	1.33	+0.94	0.38	2-3	8.5	9	5	14	11	nw.	C. E. Shubert.
Portal	Burke	1,954	38	24.0	−1.0	50	6	−13	29†	0.57	+0.05	0.30	2-3	5.5	7	7	6	17	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	25.0	−0.4	58	1	−15	30	0.43	−0.06	0.20	2	3.0	4	4	9	17	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	27	23.6	−5.1	66	1	−10	29†	6.11	+5.59	1.90	9	28.6	8	9	4	17	nw.	Assumption Abbey.
Ryder	Ward	2,108	15	.....	.....	.....	.....	.....	.....	1.39	+0.86	0.40	8	7.0	7	5	4	21	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	25.3	−2.7	58	1	−19	30	1.69	+1.16	0.56	7	7.0	7	1	15	14	.....	H. J. Bugge.
Stanley	Mountrail	2,258	6	24.4	.....	57	1	−21	30	1.26	.....	0.36	7†	6.0	9	4	11	15	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	15	.....	.....	.....	.....	.....	.....	1.38	+0.85	0.42	13-14	8.0	7	7	8	15	nw.	Geo. N. Pilgrard.
Tioga	Williams	2,279	15	.....	.....	.....	.....	.....	.....	0.48	+0.02	0.14	13	2.5	6	11	3	16	se.	Morris J. Pederson.
Trotters	Golden Valley	.....	18	.....	.....	.....	.....	.....	.....	1.60	+1.15	1.14	1-2	15.0	5	3	12	15	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	4	25.5	.....	57	1	−18	30	1.69	.....	0.62	7-8	4.8	10	6	5	19	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	25.4	−3.1	60	1	−14	30	1.64	+1.15	0.52	2	12.0	5	5	11	14	w.	J. C. Zeller.
Wildrose	Williams	2,258	16	.....	.....	.....	.....	.....	.....	0.32	−0.18	0.13	21	2.5	5	15	3	12	s.	Jonathan Winkler.
Williston	Williams	1,878	64	25.6	−1.6	51	1	−10	30	1.33	+0.75	0.61	13-14	7.3	8	4	8	18	se.	U. S. Weather Bureau.
Average for Western Division				24.9	−3.2	68	1	−21	30	1.82	+1.31	1.90	9	10.6	7	8	7	15	nw.	
Average for the State				27.1	+0.3	70	1	−21	30	2.25	+1.64	2.59	13-14	8.8	9	5	5	20	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

† Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for November 1944																																	
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum...	67	41	24	28	39	41	40	38	40	38	39	36	46	42	29	30	39	30	36	26	35	34	45	41	37	19	18	21	14	14	...	34.4
	Minimum...	40	22	17	17	27	36	38	31	27	27	33	32	33	29	22	19	13	15	26	21	20	28	25	31	18	12	11	11	−4	−11	...	22.2
Bismarck Airport ...	Maximum...	64	38	22	29	39	41	39	38	36	45	37	36	42	40	29	27	20	27	30	26	38	37	40	40	35	22	20	19	16	8	...	32.7
	Minimum...	38	21	8	11	29	37	35	33	28	28	31	34	33	29	12	5	3	4	14	19	23	31	23	32	21	16	15	7	−3	−9	...	20.3
Bottineau.....	Maximum...	54	24	22	31	34	36	37	39	32	35	38	37	37	32	30	25	24	40	40	29	35	34	40	38	26	19	22	19	14	6	...	31.0
	Minimum...	28	22	15	15	17	30	32	31	27	25	22	31	26	25	15	9	11	14	21	17	20	22	17	22	21	13	13	5	−2	−9	...	18.5
Carson	Maximum...	54	54	31	30	44	40	40	43	52	45	41	36	40	37	30	25	28	31	26	25	37	44	41	39	31	25	20	17	15	...	34.7	
	Minimum...	39	20	12	8	20	33	31	30	23	29	22	29	30	27	9	3	2	4	8	10	14	20	20	28	19	13	13	13	−6	−9	...	16.9
Crosby	Maximum...	58	36	22	23	35	49	39	48	50	46	37	35	32	35	27	26	36	39	34	33	37	41	40	41	33	21	19	18	13	15	...	33.9
	Minimum...	34	12	10	6	20	26	23	30	19	29	32	23	24	20	12	16	14	13	19	17	24	20	22	14	10	13	−4	−11	−15	...	16.1	
Devils Lake.....	Maximum...	57	32	23	29	34	38	35	35	32	35	38	38	41	39	28	29	22	30	30	28	30	35	37	39	35	23	23	19	16	14	...	31.4
	Minimum...	32	20	18	17	27	34	34	32	29	28	35	34	34	34	28	24	11	9	9	24	22	21	26	23	31	23	17	17	9	2	−2	...	22.3
Dickinson Airport...	Maximum...	57	32	18	24	38	45	33	38	42	38	32	32	33	31	17	17	31	29	27	25	37	37	36	36	25	16	22	19	17	15	...	30.0
	Minimum...	32	15	2	10	24	28	30	28	24	29	19	29	30	12	4	−1	3	1	7	20	20	20	25	25	12	10	12	13	−7	−7	...	15.6
Dunn Center	Maximum...	57	38	22	21	35	39	38	43	42	35	34	33	32	32	31	23	25	26	31	27	36	39	38	41	35	21	19	19	16	11	...	31.1
	Minimum...	36	20	6	4	20	25	22	30	20	25	25	28	29	27	10	3	3	−1	0	4	10	23	19	23	18	12	13	10	−7	−15	...	14.5
Fargo Airport	Maximum...	63	42	28	32	40	41	51	49	36	39	45	44	52	53	37	32	39	38	37	33	30	34	43	41	39	28	26	25	18	17	...	37.7
	Minimum...	42	24	23	25	31	39	40	35	30	29	38	39	41	37	30	29	26	27	32	27	27	29	26	32	28	17	19	15	7	−1	...	28.1
Fessenden	Maximum...	60	40	21	26	35	39	36	36	36	33	37	37	36	40	28	24	22	33	30	29	30	38	38	43	36	23	18	18	15	7	...	31.5
	Minimum...	39	20	16	17	24	32	33	32	29	27	32	33	30	27	20	10	2	5	18	19	20	28	20	26	21	15	13	4	−1	−10	...	20.0
Fullerton	Maximum...	61	55	32	28	40	44	47	46	36	43	41	41	49	50	37	35	41	39	35	29	30	38	45	47	44	38	24	21	10	15	...	38.0
	Minimum...	39	30	19	22	27	38	39	35	30	29	30	35	37	33	26	26	21	21	22	24	28	30	28	28	19	16	10	2	−2	...	25.4	
Garrison	Maximum...	58	32	26	25	34	37	35	41	34	44	37	41	36	33	31	26	25	33	24	25	37	39	38	42	30	20	19	19	7	9	...	31.2
	Minimum...	32	19	12	16	25	31	32	32	30	30	31	32	32	28	15	7	3	5	15	16	22	30	28	30	20	13	13	7	−9	−9	...	19.4
Golva	Maximum...	59	30	24	25	37	45	34	48	53	51	35	33	32	29	24	27	31	34	35	27												

Daily Precipitation for November 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James		.38	.15	T.	T.	T.	.01	.70				T.		.61	.23						T.				.20	.10						2.52		
Casselton	Red.			.20				.35	.69	.05					.13	.90											.25	.13	T.	.14				2.83	
Cooperstown	Sheyenne	T.	.20	.06				.18	.35					.46	.50	T.											.26	.04	T.	.14				2.19	
Courtenay	James		.02	.31			.11	.02	.58	.22		T.	T.		.10	.27										T.	.33	T.	T.	.22				2.08	
Devils Lake ^{1 5}	Devils Lake		.04	.45	.05		.03	T.	.50	.06	T.	T.	T.		.10	.96	.02	T.				T.				.01	.09	T.	.02	.03	T.			2.36	
Edgeley	James				T.				.82	.38		T.			.10	.17	T.									.10	.58	.01	T.	.10	T.			2.26	
Edmore	Devils Lake				.68			.22	.42	T.			.01		.08	.57	T.									.18	.81	.09	T.	.07	T.	T.		2.25	
Ellendale	James		.04					.06	.82	.33					.06		.03							.03			.81	.09	T.	.02				2.29	
Fargo ^{1 5}	Red.	T.	.01	.04	T.	T.	T.	.15	.56	T.	T.	T.	.01		.31	.16	T.				T.	T.				.07	.28	.13	T.	.11	.02	T.		1.85	
Forman	Sheyenne							.04	.55	.38	.02				.03	.14	.02										.12	.36	.12					1.78	
Fullerton	James		.03	T.	T.		T.	.04	.78	.40	.04	T.			.18	T.	.02					T.					.20	.50		T.	.18			2.37	
Gackle	do																																		
Grafton	Red.		.22	.05		.12	T.	.07	.20			T.		.12	2.59	.25											.18	T.	.02	.05	.02			3.89	
Grand Forks Airport ³	do	T.	.10	.04	T.	.01	T.	.18	.28	T.	T.	.02	.01	1.00	.47	T.					.01	T.				.10	.12	T.	.01	.04		T.		2.39	
Hankinson ²	do	T.						.06	.74	.03					.13	.01											.12	.25	.02			.03	T.		1.39
Hannah	Pembina		.52	.42		T.			.85						.26																			2.26	
Hillsboro	Red.		.14	.12	T.	T.	.03	.04	.53	T.		.02		.87	.45	T.	T.										.25	.06		.15	.02			2.68	
Jamestown Airport ³	James		.07	.16	.16	T.	T.	T.	.64	.07		.01	T.	.15	.48	.03						T.	T.			T.	.13	.25	.07	.08	.01	T.		2.27	
Langdon	Pembina		.60	.10	.02	.26	.02	.38	.70		T.	.02	.01	.01	.98	.15	T.					T.	T.				.20	.04	.02	.07	.03	.03		3.64	
Larimore	Red.		.32	.10				.22				.04		1.72	.16													.17						2.73	
Lisbon	Sheyenne		.04	.04			.01	.40	.54	.02				.04	.15	T.								.04	.04	.38	.04	T.	.05	T.				1.79	
Mayville	Red.		.04	.09	.07	T.	T.	.08	.63			T.	.01	.41	.83	.07						T.	T.			.04	.25	.05	.02	.16	.01			2.72	
McHenry	James		.48	.10		T.	.02	.04	.43			.02		.18	.80	.05							T.				.20	.03	.04	.10	T.			2.49	
McLeod	Sheyenne			.58				.82						.51												.39	.09	.15		.01				2.55	
Oakes ²	James		.04				.07	.68	.40					T.	.07	T.									.02	.44	.04		T.	T.	T.	T.		1.76	
Park River	Red.		.08	.02		T.	T.	.15	.26	T.	.02	T.	T.	.23	2.59	.19											.11	T.	.07	T.	T.	T.		3.72	
Pembina Airport ³	do		.02	.31	.01	T.	.02	.02	.51	.19	.01	T.	T.	.76	.82	.01						T.	T.				.19	T.	T.	.06	.01	T.		2.94	
Petersburg	do		.02	.26	.14				.34				.03	.21	.97												.16	T.	T.	.08	T.			2.21	
Sharon	do		.02	.04	.12	T.	.01	.28	.26	T.	T.	.03		.53	.74	.02											.17	.01	.02	.15	T.	T.		2.40	
Valley City	Sheyenne		T.	.05	.05		.02	.03	.59	.13	.03			.04	.62	.02	.01					T.	T.		.02	T.		.30	.13	.02	.80	T.	T.		2.86
Wahpeton	Red.		T.		.01		.01	.47	.07		T.				.96	T.						T.	T.			.05	.15	.23	T.	.02	.03	T.		2.00	
Middle Division																																			
Ashley ³	Missouri		.07	.29	T.	T.		T.	1.28	.07		T.	T.	T.	.03	.06	T.	T.				T.	T.		.04		.22	.35	T.	T.	.01	T.		2.44	
Bisbee	Devils Lake			.27	.14		.12	.27	.47				.11			.42												T.	.05	T.	.07			3.60	
Bismarck ^{1 5}	Missouri		.59	.40	.05	T.	T.	T.	.68	.04	T.		T.	T.	.22	.43	T.			T.	T.							T.	T.	T.	T.	T.		2.56	
Bottineau ²	Mouse				.08			.07	T.																				T.	.05	T.	T.		0.28	
Butte	do			.75	T.			T.	.41	.68	T.				.55	1.64	T.											T.	T.	.34	T.			4.37	
Carson	Heart			.52					.75	.41					.20	.71												T.	T.	T.	T.			2.76	
Center	Missouri			.90	.03		.10		.77	.47					.44	1.48	.17	T.						.23	T.				.02	.10	T.			4.71	
Drake ²	Mouse			.35	.31			.01	.92				T.			.58	.45													.30	T.			2.92	
Dunseith	do			.26	.25		T.	.05	T.	T.				.02	.05				T.	T.												.01		0.64	
Eckman	do			T.							.02				.92															.03	.05	.05		1.07	
Fessenden	James	T.	.46	.25		T.		.20	.46						.42	.50																		2.29	
Fort Yates	Missouri		.82	T.				1.12						.83		.05										.05								2.87	
Foxholm	Mouse		.14		T.	T.	T.	.20			.01				1.20	.13																		1.69	
Garrison ³	Missouri		.02	.84	.06				1.11	.03					.28								.09	.02					T.	.21	.01	T.		2.83	
Granville	Mouse			.22	.20		T.		.21	.30			.02		.20	.40														.03	.05	.02		1.65	
Hansboro	Devils Lake			.31	.13		.15		.86			.01			.01	.15															.06	.01		1.69	
Linton	Missouri		.08	.96	T.			T.	.80	.10				.02	.71	.14								.25			.27				.02	T.		3.35	
Laddock	Sheyenne			.57	.25		T.	.02	.12	.15		T.			.13	.73	.28														.09	T.		2.34	
Mandan ²	Missouri			.78	.06		T.	T.	.68			T.	T.		.01	1.29	.33														.14			3.44	
Max ²	do			.22	.36				.67						.40	T.										.15								1.89	
McClusky	do			.36				.75	T.	T.			T.		.75	.65	T.														.01	.29		2.80	
Minot Airport ³	Mouse	T.	.06	.01	.02	.04	.01	.29	T.	.01	.01	T.			.90	.29							T.	T.						.01	.12	.04	T.	T.	1.81
Mohall	do			.04	.12	T.	.01		.01						.10	.06															.16	.11		0.61	
Napoleon ²	Missouri			.85	.05			.90	.17						.05	.82	.08								.10		.30	.20						3.60	
New Salem	Heart			.59	.01				.43	.43					.26	.53	.07								.09							.07		2.48	
Pettibone	James			.78	T.	.07	T.	T.	.65	.27	T.	T.			.06	.57		T.	T.							.19	T.			.20	.23	.02		3.04	
Rolla	Devils Lake	T.	.70	.27	T.	T.	T.	T.	.31	.65	T.	T.	.03		.01	.20	T.	T.			T.	T.								.10	.05	.03	T.	2.35	
Rugby	Mouse			.55	.05				.07	1.15		T.			T.	.12	.10																	2.19	
Selfridge	Missouri	T.	.94				.32	.68						.15	.20	.05								.10										2.44	
Steele	do																																		
Towner	Mouse			.31			T.					T.			.21	.56								.10										2.79	
Turtle Lake	Missouri	T.		.37				.54	.85			T.			.21																.06	.15		2.11	
Tuttle	do			.70	.05		T.		.50	.16	.04	T.	T.		.28	.32	.10							.02							.04	.11	.01	.01	2.40
Underwood	do			.40				.62	.15						.28	.20																			

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a.m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 12-30-44-1050]

551.05
UNNT
1.53¹²
Nat Hist
FEB 12 1945

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LIII BISMARCK, N. D., DECEMBER 1944 No. 12

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

December was a rather pleasant month. High winds occurred on only 2 days in most sections, the 15th and 31st, with light to moderate blizzard conditions on the 31st. Temperatures averaged above normal, although a few scattered stations reported slightly below normal averages. There were 15 days with temperatures of zero or below at the coldest stations and about 6 days with zero or below in the southwestern part of the state. The last half of the month was considerably colder than the first half. Precipitation was very light. Only five stations reported more than .25 inch. Many stations had no measurable amounts. It was the least December precipitation ever recorded in the middle division, and the least amount recorded in the eastern and western divisions since 1913. Snowfall averaged the least since December 1913, but there was considerable snow on the ground in some northeastern and southwestern counties. Much feeding of livestock was necessary in those sections, especially in Stark, Billings, and some of the surrounding counties.

TEMPERATURE

The mean temperature for the state was 15.8°, or 2.3° above the 1892-1944 average for December. The mean temperature for the eastern division was 15.0°; for the middle division, 15.2°; and for the western division, 17.1°. The highest mean temperature was 21.1° at Amidon, and the lowest, 10.6° at Hannah, making a range in mean temperature of 10.5°. The absolute range was 77°, from 50° at Medora on the 6th, to -27° at Bottineau on the 25th. The average daily excess in temperature for the state since January 1, 1944 is 1.4°.

PRECIPITATION

The average precipitation for the state was 0.06 inch, or 0.41 inch less than the 1892-1944 average for December. In the eastern division the average amount was 0.08 inch; in the middle division, 0.05 inch; and in the western division, 0.04 inch. The greatest monthly amount reported was 0.43 inch at Towner; the least was a trace at 46 stations. The greatest amount recorded in any 24 consecutive hours was 0.30 inch at Bisbee on the 22d and Towner on the 5th. The accumulated excess in precipitation for the state since January 1, 1944, is 4.31 inches. The average snowfall was 0.9 inch.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	2	2	7	3	2	2	4	13	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lunar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thunderstorms ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.58	10	29.70	28	10.9	35	nw.	15	82	85	70	76	50	1464
Devils Lake...	30.59	10	29.62	6	9.5	24	nw.	7	83	81	74	81	38	1602
Fargo	30.59	1	29.66	19	13.0	34	n.	15	89	89	80	85	49	1560
Williston.....	30.64	31	29.71	6	6.9	25	nw.	31	84	87	72	75	44	1475

† And other dates.

COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	7.1	60	-39	0.44	0.49	0.78	0.57	7.7	4	13	8	10	
1893...	4.7	55	-36	0.71	0.83	1.02	0.85	8.4	6	11	9	11	
1894...	19.1	70	-32	0.38	0.17	0.32	0.29	1.6	2	18	7	6	
1895...	13.8	62	-32	0.24	0.29	0.39	0.31	2.6	3	12	9	10	
1896...	16.4	53	-35	0.50	0.46	0.13	0.36	2.6	3	13	9	9	
1897...	10.8	69	-35	0.24	0.21	0.21	0.22	2.2	3	12	8	11	
1898...	12.1	51	-38	0.24	0.24	0.24	0.24	2.1	3	14	9	8	
1899...	12.8	60	-26	0.31	0.31	0.34	0.32	3.3	3	13	7	11	
1900...	17.3	58	-29	0.35	0.29	0.29	0.31	3.0	4	13	8	10	
1901...	12.4	61	-43	0.72	0.74	0.75	0.74	7.2	5	10	7	14	
1902...	7.8	49	-35	0.50	0.30	0.72	0.51	4.2	4	14	7	10	
1903...	11.6	57	-33	0.63	0.74	0.93	0.77	7.2	6	11	7	13	
1904...	14.2	55	-43	0.60	0.62	0.73	0.65	6.2	5	7	8	16	
1905...	15.3	55	-34	0.21	0.16	0.12	0.16	1.6	4	16	2	13	
1906...	8.4	48	-40	1.09	0.91	1.27	1.09	10.7	6	11	7	13	
1907...	20.1	68	-26	0.36	0.23	0.31	0.30	3.1	3	15	7	9	
1908...	14.4	62	-37	0.53	0.26	0.28	0.36	3.7	3	13	10	8	
1909...	5.2	54	-42	1.88	1.10	0.86	1.28	12.1	7	9	8	14	
1910...	12.9	56	-34	0.45	0.42	0.42	0.43	4.6	4	12	8	11	
1911...	14.9	61	-33	0.45	0.26	0.34	0.35	4.5	4	10	8	13	
1912...	18.9	72	-28	0.62	0.55	0.13	0.43	4.0	4	14	8	9	
1913...	22.7	61	-21	0.05	0.12	0.01	0.06	0.3	1	18	6	7	
1914...	5.4	57	-42	0.58	0.40	0.42	0.47	5.7	4	12	9	10	
1915...	15.8	57	-27	0.56	0.56	0.44	0.52	5.4	5	11	9	11	
1916...	2.7	61	-50	1.39	1.34	0.81	1.18	13.9	5	15	8	8	
1917...	0.7	58	-44	0.51	0.64	0.61	0.59	7.4	6	9	9	13	
1918...	18.5	65	-41	0.97	0.92	0.76	0.88	9.9	5	9	8	14	
1919...	7.4	49	-38	0.65	0.48	0.28	0.47	4.8	3	14	9	8	
1920...	15.2	59	-32	0.48	0.33	0.16	0.32	3.2	3	11	9	11	
1921...	16.5	59	-33	0.52	0.33	0.38	0.41	3.9	4	14	7	10	
1922...	8.5	55	-34	0.75	0.76	0.53	0.68	7.4	5	11	8	12	
1923...	22.2	62	-36	0.38	0.35	0.23	0.32	3.6	3	16	8	7	
1924...	2.9	58	-46	0.40	0.39	0.54	0.44	5.3	4	12	7	12	
1925...	16.5	67	-38	0.24	0.30	0.30	0.28	2.6	3	12	8	11	
1926...	9.2	55	-36	0.60	0.50	0.59	0.56	5.5	3	14	8	9	
1927...	1.8	43	-38	0.96	0.52	0.91	0.80	8.7	5	14	7	10	
1928...	20.7	57	-30	0.47	0.23	0.27	0.32	3.2	3	14	7	10	
1929...	12.5	59	-38	0.68	0.88	0.88	0.81	9.9	5	12	8	11	
1930...	19.9	53	-30	0.21	0.16	0.21	0.19	2.0	3	12	8	11	
1931...	21.0	58	-21	0.25	0.15	0.29	0.23	2.7	2	13	8	10	
1932...	12.4	60	-31	0.17	0.14	0.28	0.20	1.7	3	14	10	7	
1933...	8.6	62	-38	1.09	0.79	0.83	0.90	9.7	6	9	8	14	
1934...	12.6	53	-44	0.40	0.22	0.29	0.30	3.9	5	9	8	14	
1935...	12.6	51	-34	0.65	0.52	0.34	0.50	5.6	5	10	7	14	
1936...	15.0	59	-36	0.50	0.32	0.46	0.43	5.5	4	11	8	12	
1937...	11.4	51	-33	0.62	0.51	0.49	0.54	6.5	6	10	9	12	
1938...	18.2	55	-41	0.40	0.30	0.26	0.32	4.1	4	11	10	10	
1939...	26.7	70	-20	0.27	0.30	0.27	0.28	2.3	4	10	10	11	
1940...	19.8	59	-36	0.79	0.28	0.19	0.42	4.0	4	10	7	14	
1941...	22.5	66	-20	0.15	0.17	0.14	0.15	1.8	3	10	11	10	
1942...	10.9	53	-30	0.67	0.52	0.39	0.53	7.1	7	7	8	16	
1943...	21.5	65	-22	0.15	0.12	0.10	0.12	1.0	2	16	9	6	
1944...	15.8	50	-27	0.08	0.05	0.04	0.06	0.9	1	13	10	8	
Period	13.5	72	-50	0.53	0.44	0.44	0.47	4.9	4	12	8	11	

NAT. HIST.

Climatological Data for December 1944

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Carrington	Foster	1,579	46	14.4	+1.8	40	6	-14	21†	T.	-0.41	T.	9†	T.	0	22	6	3	nw.	Soo Line Agent.
Casselton	Cass	934	48	17.0	+4.2	40	7†	-12	21	0.15	-0.37	0.15	22	2.5	1	19	6	6	n.	C. Hayford.
Cavalier	Pembina	894	34	13.0	.....	40	6†	-15	21†	0.17	-0.52	0.10	21-22	4.0	4	3	11	17	nw.	City Light & Power Co.
Colgate	Steele	1,180	11	.....	.....	40	.....	.....	.....	T.	-0.53	T.	9†	T.	0	8	18	5	n.	O. M. Jensen.
Cooperstown	Griggs	1,428	47	15.3	+2.3	41	7	-17	21	0.09	-0.49	0.09	22	1.4	1	11	9	11	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	14	.....	.....	41	.....	.....	.....	T.	-0.67	T.	8†	T.	0	18	7	6	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	47	13.4	+3.9	41	6	-15	25	0.11	-0.43	0.05	21	1.8	6	8	10	13	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	43	17.3	+2.3	41	6	-12	21	0.03	-0.46	0.02	11	0.9	2	10	13	8	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	20	11.0	+0.5	38	6	-21	25	0.05	-0.49	0.04	18	0.8	2	14	4	13	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	18.0	+1.7	45	14	-11	21	0.09	-0.37	0.07	30	1.2	2	9	10	12	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	17	14.6	+3.1	40	14	-14	21	0.19	-0.53	0.06	21	3.0	9	7	9	15	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	51	18.7	+3.4	42	14	-10	21	0.03	-0.53	0.03	9	0.5	1	15	9	7	nw.	Helge Dyste.
Fullerton	Dickey	1,439	46	19.2	+4.0	44	14	-9	21†	0.15	-0.62	0.09	15	1.5	2	4	16	11	nw.	F. O. Alin.
Gackle	Logan	1,951	14	.....	.....	40	.....	.....	.....	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jack Dixon.
Grafton	Walsh	827	52	15.6	+4.9	41	7	-15	21	0.02	-0.51	0.02	17	0.4	1	16	10	5	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	53	13.8	+2.8	38	14	-13	21†	0.27	-0.35	0.11	21-22	3.5	7	13	8	10	sw.	University of N. Dak.
Grand Forks Aprt. 2½ mi. W	Grand Forks	832	4	13.6	.....	38	6†	-15	21†	0.23	.....	0.17	21-22	3.1	5	9	7	15	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	15	16.4	-1.3	43	16	-13	21	0.08	-0.44	0.07	15	1.2	2	19	2	10	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	10.6	+3.0	35	14	-18	21	T.	-0.59	T.	4†	T.	0	8	10	13	nw.	A. E. Prior.
Hillsboro	Trall	901	44	15.8	+7.8	40	6†	-18	25	0.14	-0.50	0.06	22	2.2	6	8	13	10	nw.	Alfred Jahneke.
Jamestown, 2 miles SE	Stutsman	1,457	52	16.8	+2.9	42	6	-10	21†	T.	-0.65	T.	8†	T.	0	22	1	8	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	4	14.8	.....	40	6	-13	21	0.03	.....	0.02	8-9	0.4	3	15	6	10	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	15.2	.....	40	6†	-16	21	T.	.....	T.	8†	T.	0	15	7	9	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	48	11.1	+2.3	37	6	-20	21	0.18	-0.45	0.05	22	2.3	9	15	6	10	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	51	12.7	+1.2	40	6	-21	25	T.	-0.56	T.	10	T.	0	16	5	10	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	40	18.6	+3.8	45	14	-10	26	T.	-0.51	T.	6†	T.	0	15	5	11	nw.	J. O. Halverson.
Mayville	Trall	975	48	16.0	+2.7	40	7	-17	25	0.21	-0.31	0.07	21†	3.8	5	9	11	11	n.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	22	11.6	+0.8	39	6	-19	21	0.04	-0.45	0.03	21-22	0.4	2	14	10	7	nw.	C. E. Blasky.
Medford, 3 miles E.	Richland	1,075	33	15.6	+0.5	41	16	-13	21	0.10	-0.36	0.10	19	1.0	1	18	7	6	nw.	J. G. Carlson.
McVille	Nelson	1,467	14	.....	.....	40	.....	.....	.....	T.	.....	T.	7†	T.	0	3	21	7	nw.	A. M. Casad.
Milnor	Sargent	1,117	5	15.6	.....	42	6	-12	21†	0.15	-0.39	0.15	9	2.0	1	16	15	0	nw.	E. W. Wilson.
Oakes	Dickey	1,318	15	18.9	+2.7	45	14	-9	21	T.	-0.50	T.	8†	T.	0	13	5	13	nw.	F. H. Murray.
Park River	Walsh	996	40	12.2	+1.1	40	6†	-17	21†	T.	-0.51	T.	8†	T.	0	20	4	7	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	70	11.6	+4.6	38	6	-19	25	0.06	-0.56	0.04	21-22	1.1	4	7	15	9	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	14	11.8	.....	40	6	-17	21†	0.02	-0.46	0.01	18†	0.2	2	10	14	7	nw.	T. M. Rykken.
Sharon	Steele	1,516	20	13.0	+0.8	38	6	-18	21	0.08	-0.40	0.03	6†	0.6	3	7	14	10	nw.	Nels O. Grefsheim.
Valley City	Barnes	1,229	38	17.9	+3.4	40	6†	-9	25	0.09	-0.40	0.05	20	1.4	3	14	7	10	nw.	I. C. Robertson.
Walperton	Richland	962	52	18.2	+2.4	40	14†	-13	21	0.03	-0.47	0.01	9-10†	1.5	3	11	7	13	nw.	W. J. Cavanaugh.
Average for Eastern Division				15.0	+2.4	45	14	-21	25	0.08	-0.45	0.17	21-22	1.2	2	13	9	9	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	48	14.5	-0.3	40	6	-13	21	0.09	-0.41	0.06	30	2.5	3	7	11	13	n.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	41	14.4	+4.7	43	7	-19	25	0.36	-0.07	0.30	22	4.0	2	9	9	13	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	70	18.0	+2.3	46	6	-9	25	T.	-0.48	T.	7†	T.	0	12	5	14	nw.	U. S. Weather Bureau.
Bismarck Airt. 2½ mi. SE	Burleigh	1,650	5	17.8	+0.5	45	6	-9	31	T.	-0.57	T.	8†	T.	0	12	5	14	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	52	10.7	+2.4	39	6	-27	25	0.07	-0.40	0.07	21	0.7	1	11	7	13	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	18	15.6	+0.8	41	6	-16	21	T.	-0.49	T.	8†	T.	0	10	9	12	nw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	32	18.2	+1.6	44	6	-15	25	T.	-0.48	T.	20†	T.	0	10	14	7	nw.	J. W. Evans.
Center	Oliver	2,100	6	16.2	.....	42	6	-15	25	0.01	.....	0.01	17	0.2	1	10	12	9	nw.	Fred L. Heinz.
Drake	McHenry	1,634	15	13.9	-1.5	40	6	-14	21†	0.01	-0.40	0.01	31	0.2	1	15	14	2	s.	H. G. Kringen.
Dunseith, 2 miles NNE	Rolette	1,682	48	12.8	+2.5	41	6†	-22	25	0.28	-0.15	0.27	21	4.8	3	12	7	12	n.	Hubert Downs.
Eckman	Bottineau	1,500	39	14.6	+4.3	43	6	-16	25	0.05	-0.42	0.05	24	0.7	1	7	13	11	nw.	E. R. Sherman.
Fessenden	Wells	1,610	32	14.3	+2.5	40	6	-15	21	0.27	-0.29	0.07	22	4.0	6	6	10	15	n.	John V. Zuber.
Fort Yates	Sioux	1,670	44	19.3	+0.1	46	6	-14	31	0.04	-0.34	0.04	30	1.0	1	20	7	4	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	23	15.2	+1.0	46	6	-13	25	T.	-0.51	T.	8†	T.	0	18	9	4	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	67	15.7	+1.3	43	6	-13	31	T.	-0.48	T.	8†	T.	0	11	12	8	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	37	16.2	+3.2	45	6†	-11	25	T.	-0.46	T.	4†	T.	0	16	10	5	nw.	Fred Roble.
Hansboro	Towner	1,597	36	11.4	+2.2	41	6	-17	21	0.04	-0.50	0.04	21	1.2	1	12	8	11	nw.	W. E. Disher.
Harvey	Wells	1,596	41	.....	.....	40	.....	.....	.....	0.03	-0.50	0.02	8	1.0	2	4	10	17	nw.	Orville Hoksich.
Leeds	Benson	1,515	4	13.2	.....	39	6	-17	25	0.11	.....	0.11	6	T.	2	10	11	10	nw.	John Dulgane.
Linton	Emmons	1,711	27	18.0	+2.7	45	6	-11	25	0.03	-0.36	0.03	9	0.8	1	15	9	7	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	29	13.2	+1.8	40	6	-19	21	T.	-0.43	T.	6†	T.	0	8	15	8	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	30	16.4	+1.3	45	6	-11	25	0.01	-0.44	0.01	21	0.2	1	18	2	11	sw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	15	14.0	-0.4	41	6	-14	26	T.	-0.40	T.	8†	T.	0	17	3	11	.....	Soo Line Agent.
McClusky	Sheridan	1,943	26	15.3	+1.6	40	6	-16	21</											

Climatological Data for December 1944—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours †	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Epping	Williams	2,224	33	16.4	+1.2	45	6	-19	25	T.	-0.45	T	8†	T.	0	13	7	11	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	7							0.01	-0.45	0.01	30	0.3	1	13	9	9	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	25	19.4		46	6	-13	25	0.15	-0.33	0.05	29-30	2.1	4	10	13	8	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	4	18.8	+0.4	47	6	-17	31	0.06	-0.41	0.02	30	1.9	5	7	13	11	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	35	16.6	+4.3	44	6†	-18	25	0.01	-0.64	0.01	30	0.2	1	19	9	3	nw.	L. D. Nielson.
Halliday	Dunn	2,073	3							T.		T.	8†	T.	0	9	11	11	uw.	John Kisse.
Hettinger	Adams	2,675	36							0.10	-0.27	0.10	30	3.0	1	12	10	9	nw.	A. W. Anderson.
Kenmare	Ward	1,799	12	14.8	+0.6	45	6	-15	25†	T.	-0.43	T.	30	T.	0	21	6	4	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	34	20.9	+2.4	48	6	-7	31	0.13	-0.27	0.10	30	3.3	3	15	9	7	nw.	S. P. Graue.
Medora	Billings	2,271	28	21.0		50	6	-11	25	0.02	-0.46	0.02	30	0.3	1	18	10	3	sw.	Harry Roberts.
Mott	Hettinger	2,424	36	20.2	+4.4	48	6	-13	25	T.	-0.48	T	17†	T	0	18	4	9	nw.	P. G. Wick.
New England	Hettinger	2,621	49	20.8	+3.4	45	19	-13	25	T.	-0.40	T	24	T.	0	14	11	6	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		3	17.2		42	6	-16	25	0.07		0.05	30	0.7	3	16	7	8	w.	Peter F. Fieck.
Parshall	Mountrail	1,929	28	15.8	+1.3	45	6	-15	25	T.	-0.41	T	8†	T	8	8	21	2	nw.	C. E. Shubert.
Portal	Burke	1,954	38	12.4	-0.2	43	6	-19	25	T.	-0.45	T.	30	T.	0	15	10	6	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	38	13.8	-2.0	43	6	-22	25	0.07	-0.47	0.07	8	1.0	1	12	8	11	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	27	18.3	+2.1	41	6	-11	25	0.01	-0.41	0.01	8-9	0.1	1	9	13	9	nw.	Assumption Abbey.
Ryder	Ward	2,108	15							0.10	-0.36	0.05	17	1.5	3	17	8	6	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	18	14.4	+0.9	45	6†	-12	21†	T	-0.45	T	8†	T.	0	5	17	9	.....	H. J. Bugge.
Stanley	Mountrail	2,253	6	13.0		42	6	-20	25	0.06	-0.06	0.06	23-24	0.8	1	10	15	6	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	15							0.03	-0.39	0.02	30	0.7	2	10	14	7	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	15							T.	-0.44	T.	3†	T	0	10	8	13	nw.	Morris J. Pederson.
Trotters	Golden Valley		18							0.07	-0.33	0.03	8	1.3	3	21	7	nw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	4	16.6		48	14	-16	25	T		T.	8†	0.3	0	13	11	7	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	30	18.0	+2.7	45	6	-17	25	0.04	-0.49	0.04	8†	1.0	1	14	13	4	nw.	J. C. Zeller.
Willard	Williams	2,258	16							T	-0.52	T	8†	T	0	24	4	3	nw.	Jonathan Winkler.
Williston	Williams	1,878	64	17.4	+3.6	45	14	-14	31	0.03	-0.55	0.01	3†	0.4	3	8	9	14	nw.	U. S. Weather Bureau.
Average for Western Division				17.1	+1.2	50	6	-22	25	0.04	-0.40	0.10	30	0.7	1	13	11	7	nw.	
Average for the State				15.8	+2.3	50	6	-27	25	0.06	-0.41	0.30	5†	0.9	1	13	10	8	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
 † Trace, precipitation 0.005 inch or less.
 ‡ And other dates.
 † Best available used for stations not equipped with recorders.

Daily Temperatures for December 1944

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum	20	29	32	34	33	40	34	22	22	16	25	31	34	37	30	38	17	25	34	27	16	16	16	19	6	24	19	30	25	13	8	24.9
	Minimum	-3	12	14	13	6	22	14	13	11	-1	-1	13	8	42	11	11	-3	10	7	-7	-13	-4	-4	-5	-11	-3	-1	-1	6	4	-11	4.1
Bismarek Airport	Maximum	-19	32	35	36	38	45	35	22	22	19	30	31	40	42	34	40	20	30	38	27	23	17	20	22	8	26	21	28	22	11	11	27.3
	Minimum	-1	14	12	16	9	19	17	17	19	7	14	21	16	23	14	15	2	12	11	-2	-6	4	5	-3	-9	0	4	4	5	6	-9	8.3
Bottineau	Maximum	18	20	32	32	38	39	27	22	23	18	27	35	36	38	28	36	21	27	25	8	14	5	20	15	10	20	13	16	17	14	12	22.7
	Minimum	-4	5	-2	0	6	14	11	11	12	-5	8	9	7	14	16	7	-10	2	4	0	-19	-12	-13	-14	-27	-21	-5	-10	-3	0	-20	-1.3
Carson	Maximum	16	33	37	40	42	44	38	23	20	16	28	34	38	40	34	38	31	31	42	35	20	15	18	21	20	28	30	31	33	20	8	29.2
	Minimum	-1	11	12	15	15	28	18	7	12	11	9	19	15	18	18	13	-5	5	7	6	8	5	-2	4	-15	-3	1	7	3	2	-8	7.1
Crosby	Maximum	26	26	35	33	39	45	36	20	20	21	30	35	41	43	36	32	28	38	32	27	16	16	19	16	6	22	17	15	10	6	6	25.2
	Minimum	-8	-2	-1	11	15	20	15	17	13	4	13	12	17	18	15	13	-6	12	5	0	-11	-3	0	-10	-22	-7	-6	-2	-6	-1	-12	3.5
Devils Lake	Maximum	20	30	27	34	36	41	31	24	22	12	23	31	30	36	31	33	11	27	26	22	16	16	16	12	0	17	11	20	20	7	6	22.2
	Minimum	0	11	11	17	14	20	20	21	8	0	8	14	11	17	10	7	-6	11	12	-9	-13	-7	-2	-8	-15	-1	-3	-2	5	3	-8	4.7
Dickinson Airport	Maximum	28	28	33	33	38	41	32	18	20	18	26	31	37	37	28	35	22	28	39	23	24	16	16	18	13	23	22	23	23	13	5	25.7
	Minimum	3	11	11	20	19	32	15	11	7	10	10	21	22	20	16	16	8	12	12	-4	-6	2	-1	-8	-12	0	5	8	7	-5	-14	8.0
Dunn Center	Maximum	23	24	35	34	37	44	38	26	19	19	27	33	40	41	37	39	31	29	40	36	22	21	17	17	9	26	24	18	20	11	9	27.3
	Minimum	-1	5	10	18	19	28	20	12	13	8	11	19	16	21	18	17	2	6	7	7	-7	-1	0	0	-15	-6	4	3	-3	2	-8	7.3
Fargo Airport	Maximum	20	30	36	35	37	37	35	28	25	17	22	31	31	40	33	34	9	25	27	25	10	17	20	23	1	26	13	25	30	13	12	24.6
	Minimum	-4	15	19	15	15	22	23	24	12	4	2	14	5	14	9	9	-3	8	15	-10	-14	-10	-9	-8	-12	-5	-4	-6	13	-1	-6	4.7
Fessenden	Maximum	23	26	32	34	34	40	37	22	25	17	22	28	32	36	34	35	24	26	31	25	13	18	15	14	0	17	17	19	15	5	23.7	
	Minimum	-5	9	10	20	12	20	18	15	18	-1	6	16	10	18	17	10	-8	6	11	-4	-15	-4	-2	-4	-14	-3	-1	-2	2	5	-7	4.9
Fullerton	Maximum	23	31	32	37	35	43	41	27	25	20	28	34	35	44	35	42	35	26	33	30	15	18	20	24	18	27	24	35	30	17	11	28.9
	Minimum	-1	15	25	17	16	20	24	20	20	9	4	15	12	20	22	12	0	4	9	9	5	-2	4	-9	-3	6	0	12	10	6	9.4	
Garrison	Maximum	18	30	36	36	41	43	31	21	22	22	31	32	39	42	29	37	15	30	36	23	19	11	19	14	8	26	16	21	16	11	5	25.2
	Minimum	-4	8	8	14	10	21	14	17	6	11	18	18	25	18	14	0	13	8	-6	-8	-1	-1	-1	-7	-12	-1	3	3	0	-2	-13	6.2
Golva	Maximum	37	40	37	38	43	47	34	22	22	26	29	38	44	44	31	43	25	34	45	25	27	18	17	18	14	26	27	34	34	14	8	30.4
	Minimum	5	9	15	18	21	30	17	14	14	7	12	24	23	23	15	17	7	7	8	-8	-11	0	-3	-15	-16	-3	1	2	4	1	-17	7.1
Grafton	Maximum	19	29	30	36	35	37	41	28	27	18	28	29	32	38	35	35	25	26	27	25	16	11	15	17	15	20	19	14	14	11	25.0	
	Minimum	-1	11	16	15	15	14	23	21	15	5	5	17	5	15	15	9	-4	4	18	-4	-15	-4	-4	2	4	-11	2	-7	11	2	-1	6.2
Grand Forks Airport	Maximum	18	30	33	35	35	38	34	28	24	16	25	30	32	38	33	34	9	24	27	24	11	15	18	14	1	21	12	23	27	9	7	23.4
	Minimum	-2	13	15	11	18	20	22	23	10	3	5	11	6	15	9	4	-5	8	15	-12	-15	-7	-7	-9	-15	-9	-9	-9	0	-4	3.7	
Jamestown Airport	Maximum	21	31	30	33	36	40	33	24	24	20	25	32	34	37	31	36	11	27	30	25	18	15	20	22	5	25	13	22	13	9	25.0	
	Minimum	-7	12	14	14	8	18	19	21	5	2	1	16	10	19	11	9	-3	10	12	-8	-13	-2	-3	-5	-10	-5	-4	-4	7	4	-6	4.6
Kenmare	Maximum	24	27	36	39	43	45	29	23	21	21	31	34	40	43	31	31	21	27	35	11	12	10	18	17	11	25	15	11	15	9	-1	24.3
	Minimum	-4	5	11	18	19	22	19	15	15	5	5	14	20	25	19	17	-3	3	12	5	9	5	5	-3	-15	-15	-1	-1	-6	-6	-5	5.3
Langdon	Maximum	17	26	31	32	31	37	35	26	23	17	29	33	34	35	30	34	16	25	23	18	3	7	14	6	1	14	9	7	16	8	5	20.1
	Minimum	-2	10	7	12	10	12	17	15	2	5	7	14	5	13	9	4	-11	3	13	-7	-20	11	-7	-5	-18	-11	-4	-10	6	0	-2	1.5
Marmarth	Maximum	35	37	38	38	44	48	40	30	21	23	30	39	44	43	37	43	33	36	43	37	30	23	18	20	16	20	30	35	23	23	9	31.8
	Minimum	5	16	11	12	29	25	21	18	10	15	4	12	21	19	25	12	10	18	10	15	0	6	5	-1	-5	5	4	2	5	-7	10.0	
Minot Airport	Maximum	19	26	33	34	38	43	29	22	21	21	30	32	38	40	31	35	12	27	30	22	16	11	17	15	5	23	13	12	9	7	6	23.1
	Minimum	1	10	10	10	14	19	17	17	17	5	12	19	20	24	15	11	-3	0	11	-7	9	-2	3	-8	-12	1	0	1	-2	0	-14	6.1
Mott	Maximum	28	35	37	39	44	48	40	26	22	20	30	34	42	43	38	41	36	36	46	38	25	25	30	21	18	31	39	31	33	25	9	32.0
	Minimum	1	11	15	12	15	2	21	14	3	15	10	22	19	23	14	9	9	12	10	0	5	-2	3	-13	-4	0	0	9	4	5	-4	8.4
Pembina Airport	Maximum	18	30	30	35	32	38	34	26	21	13	25	26	28	37	33	31	8	25	25	12	6	8	16	14	1	17	13	16	23	6	2	21.2
	Minimum	0	11	16	14	15	22	20	9	-2	3	9	3	12	6	-2	-6	7	19	-12	-16	-8	9	-11	-19	-10	-8	-10	6	-7	-7	1.9	
Sharon	Maximum	20	26	31	34	35	38	36	25	24	15	23	34	31	37	32	33	14	26	27	20	7	5	15	16	0	19	10	20	11	5	22.3	
	Minimum	-2	12	13	13	10	16	20	21	10	6	2	16	7	17	15	14	-6	2	9	-7	-18	-7	-9	-7	-15	-12	-4	-7	5	1	-2	3.6
Steele	Maximum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valley City	Maximum	23	32	32	35	36	40	40	27	27	20	25	33	32	39	36	36	34	26	32	25	13	17	19	23	9	25	21	24	29	18	10	27.0
	Minimum	-4	13	23	15	11	21	24	23	20	11	4	16	10	20	21	13	-1	5	10	17	-8	3	-6	3	-9	-9	3	-5	15	10	3	8.8
Wahpeton	Maximum	21	31	35	35	35	37	38	30	27	22	21	32	32	40	38	40	40	24	29	29	7	17	21	25	20	28	27	30	31	24	15	28.4
	Minimum	-4	13	25	19	17	22	24	23	20	12	1	16	5	13	17	10	-3	1	12	-1	-13	-4	-5	-7	-7	-6	6	3	21	10	1	7.9
Williston	Maximum	28	27	37	34	37	44	31	20	23	21	31	37	43	45	31	35	18	32	39	22	20	13	1									

Daily Precipitation for December 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James Red.									T.									T.				T.	.15							T.	T.	T.	.15	
Casselton	Sheyenne									T.	T.								T.				.09	T.							T.	T.	T.	.09	
Cooperstown	James									T.	T.								T.													T.	T.	T.	.09
Courtenay	James									T.	T.								T.													T.	T.	T.	.09
Devils Lake ^{1 5}	Devils Lake						.01	T.	.02	.01	T.								T.			T.	.05	T.	T.	T.					T.	T.	T.	.01	
Edgeley	James									T.	.01	T.		.02					T.			T.										T.	T.	T.	.03
Edmore	Devils Lake								.01	T.													T.	T.									T.	T.	.05
Ellendale	James									T.	.02	T.		.03					T.			T.		T.			T.						T.	T.	.03
Elkdale	James									T.	.02	T.		.03					T.			T.		T.									T.	T.	.03
Elkdale	James									T.	.02	T.		.03					T.			T.		T.									T.	T.	.03
Elkdale	James									T.	.02	T.		.03					T.			T.		T.									T.	T.	.03
Elkdale	James									T.	.02	T.		.03					T.			T.		T.									T.	T.	.03
Elkdale	James									T.	.02	T.		.03					T.			T.		T.									T.	T.	.03
Elkdale	James									T.	.02	T.		.03					T.			T.		T.									T.	T.	.03
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Elkdale	James									T.	.02	T.		.03																					

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

2 Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 2-9-45-1050]

551.05
UNNT
V.53¹³

Not Recd

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIII BISMARCK, N. D., ANNUAL 1944 No. 13

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

The year 1944 was the fifth consecutive year in which precipitation was above normal. There were only three other years since 1892 with greater annual precipitation. The 5 years, 1940 to 1944, averaged 5.16 inches more moisture annually than fell during the previous 5 years, 1935 through 1939. Precipitation averaged more than 10 inches in the western section from May 1st to June 28th, with nearly as much recorded in the middle and eastern sections. Snowfall averaged slightly below normal with the greatest amount falling during March in the eastern and middle divisions and during November in the western division. Temperatures averaged below normal during the summer months and above normal during the winter months. The frost-free season was about 2 weeks longer than normal at most stations. The year was very favorable from an agricultural standpoint and bumper crops of wheat and corn were produced.

The average temperature for the state was 41.0°, or 1.4° above the 1892-1944 average, and 1.2° higher than the 1943 average. The highest annual temperature reported was 44.2° at Wahpeton; the lowest was 37.6° at Edmore. The absolute range in temperature was 146°, from 103° at Ft. Yates on August 9th to -43° at Golva on February 11th.

The average annual precipitation for the state was 21.45 inches, or 4.31 inches above the 1892-1944 average, and 3.07 inches more than the average for 1943. The greatest annual precipitation reported was 37.98 inches at Milnor; the least was 14.97 inches at Ashley. The greatest monthly amount reported was 14.01 inches at Mohall in June. The average snowfall was 29.3 inches. The average number of days with 0.01 inch or more of precipitation was 79.

There were 151 clear days, 109 partly cloudy days, and 106 cloudy days.

The prevailing wind was northwest.

CLIMATOLOGICAL SUMMARY, 1944

Month	Temperature in degrees Fahrenheit				Precipitation, in inches			Number of days				Prevailing direction of the wind
	Mean	Departure	Highest	Lowest	Average	Departure	Snowfall	Precip., .01 inch or more	Clear	Pt. cloudy	Cloudy	
January	21.8	+15.1	61	-26	0.36	-0.10	4.8	3	16	8	7	nw.
February	11.2	+1.4	50	-43	0.29	-0.18	4.3	4	13	7	9	nw.
March	16.7	-6.9	53	-25	0.81	+0.02	10.2	8	7	9	15	nw.
April	40.8	-0.7	77	-11	0.80	-0.64	0.2	4	14	7	9	se.
May	58.2	+4.6	95	11	2.73	+0.40	0.1	11	11	12	8	se.
June	61.7	-1.2	93	30	6.43	+2.91	T.	13	10	9	11	se.
July	67.6	-1.4	102	83	1.74	-0.69	0	6	16	13	2	nw.
August	65.6	-0.9	103	34	4.40	+2.31	0	11	13	11	7	nw.
September ..	56.4	-0.4	91	21	1.46	-0.08	T.	8	12	10	8	nw.
October	48.7	+4.5	84	11	0.12	-0.87	T.	1	21	8	2	sw.
November	27.1	+0.3	70	-21	2.25	+1.64	8.8	9	5	5	20	nw.
December	15.8	+2.3	50	-27	0.06	-0.41	0.9	1	13	10	8	nw.
Annual ...	41.0	+1.4	103	-43	21.45	+4.31	29.3	79	151	109	106	nw.

ANNUAL COMPARATIVE DATA FOR THE STATE

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	37.8	108	-52	20.24	21.00	13.79	18.34	34.9	70	157	95	114	
1893...	35.8	112	-54	18.02	16.43	13.19	16.55	36.1	55	154	104	107	
1894...	40.3	107	-47	17.45	14.55	14.84	15.61	24.6	56	174	100	91	
1895...	37.7	104	-50	18.41	16.97	16.69	17.36	20.9	63	155	117	93	
1896...	37.3	107	-42	26.30	21.67	19.97	22.65	48.3	80	143	111	112	
1897...	37.8	109	-48	18.75	16.04	13.26	16.02	33.9	63	162	105	98	
1898...	39.2	106	-38	18.97	15.55	13.92	16.15	22.7	57	159	108	98	
1899...	36.9	109	-48	17.40	19.48	15.98	17.62	26.6	60	161	105	99	
1900...	40.9	114	-48	21.61	18.70	16.88	19.06	23.2	62	178	97	90	
1901...	40.4	110	-43	24.35	17.54	16.33	19.41	20.2	63	175	92	98	
1902...	39.4	106	-39	21.66	18.50	17.89	19.35	29.9	62	160	79	126	
1903...	38.3	108	-49	20.18	18.27	19.28	19.24	28.8	65	166	81	118	
1904...	37.6	103	-52	21.59	18.26	13.59	17.81	38.1	68	150	73	143	
1905...	39.3	107	-46	23.23	19.17	14.34	18.91	29.6	66	152	79	134	
1906...	39.4	109	-40	21.14	17.68	21.28	20.03	35.4	78	164	93	108	
1907...	36.9	104	-49	17.17	13.06	12.69	14.31	33.7	63	175	101	89	
1908...	40.7	104	-41	18.84	17.77	19.05	18.55	43.7	75	164	97	105	
1909...	38.2	109	-48	21.79	15.89	16.61	18.10	33.5	71	143	110	112	
1910...	41.1	114	-50	11.88	12.17	13.56	12.54	21.0	52	180	92	93	
1911...	38.0	108	-43	21.73	18.60	14.94	18.42	36.5	76	160	100	105	
1912...	38.2	118	-52	22.72	19.73	18.71	20.39	19.3	74	161	102	103	
1913...	40.0	106	-54	17.85	13.39	12.70	14.65	19.4	64	166	104	95	
1914...	40.1	109	-47	19.81	19.57	17.53	18.97	30.0	70	155	110	100	
1915...	39.7	104	-48	21.06	19.06	17.72	19.28	21.2	72	148	101	116	
1916...	36.2	105	-56	24.11	18.88	16.63	19.87	54.2	70	170	97	99	
1917...	36.3	114	-48	12.61	10.44	9.20	10.75	40.5	60	154	111	100	
1918...	40.0	102	-44	18.01	16.00	14.01	16.01	29.7	63	159	104	102	
1919...	38.6	108	-44	20.55	14.71	11.51	15.59	47.2	60	165	107	93	
1920...	39.5	108	-44	17.67	14.26	13.92	15.28	27.9	64	166	108	92	
1921...	42.0	110	-33	23.05	18.96	16.30	19.44	29.4	74	158	111	96	
1922...	39.7	115	-46	21.97	19.09	18.62	19.89	42.8	75	155	100	110	
1923...	40.7	103	-40	19.12	16.65	17.60	17.79	30.1	64	160	110	95	
1924...	38.2	105	-46	20.23	16.39	14.74	17.12	26.1	66	158	101	107	
1925...	40.6	111	-39	21.91	14.74	13.29	16.65	19.7	64	158	107	100	
1926...	40.7	108	-36	18.05	14.40	13.65	15.37	23.7	68	151	105	109	
1927...	38.0	101	-44	22.72	21.25	20.56	21.51	36.2	79	150	102	113	
1928...	41.1	107	-41	20.03	18.12	15.48	17.88	17.3	59	177	101	88	
1929...	38.0	109	-44	15.09	13.27	14.57	14.31	41.8	65	171	98	96	
1930...	41.4	107	-43	17.13	14.19	13.36	14.89	25.0	66	166	101	98	
1931...	44.9	111	-31	18.48	14.10	12.41	15.00	18.0	56	180	92	93	
1932...	40.0	108	-34	18.43	16.39	16.71	17.18	34.9	69	156	108	102	
1933...	41.1	110	-45	14.01	12.74	13.59	13.45	42.2	65	161	104	100	
1934...	43.4	112	-44	13.33	8.61	6.60	9.51	15.2	54	160	109	96	
1935...	39.4	110	-44	21.24	17.97	14.91	18.04	33.3	77	137	113	115	
1936...	38.8	121	-60	10.09	8.21	8.18	8.83	35.2	59	171	110	85	
1937...	39.1	111	-44	20.10	17.37	13.63	17.03	36.0	69	150	111	104	
1938...	41.9	109	-41	15.27	14.60	16.13	15.33	30.6	73	149	116	100	
1939...	41.9	108	-46	15.56	13.88	13.01	14.15	25.5	71	161	109	95	
1940...	41.0	107	-39	19.23	16.79	16.14	17.39	33.6	80	142	110	114	
1941...	42.2	111	-40	25.07	22.42	22.19	23.23	25.1	92	128	115	122	
1942...	40.9	105	-35	22.40	17.62	16.22	18.75	35.3	84	128	114	123	
1943...	39.8	104	-44	18.59	18.58	17.68	18.38	41.0	76	157	109	99	
1944...	41.0	103	-43	24.55	20.75	19.05	21.45	29.3	79	151	109	106	
Period	39.6	121	-60	19.45	16.61	15.36	17.14	31.1	68	159	103	103	

THE WEATHER BY MONTHS

JANUARY.—The outstanding feature of the weather during January was the continued mild temperatures and lack of precipitation. It was the warmest January since records began. Nearly all the precipitation occurred on the 18th and from the 25th to 28th. The least amount occurred in the eastern division. Due to the mild weather, outdoor work was carried on with little interruption and little feeding of livestock was necessary.

FEBRUARY.—Temperatures were above normal in the eastern and western divisions and slightly below normal in the central division. Moderate temperatures prevailed the first week and for 10 days at the close, but sub-zero temperatures occurred from the 8th to the 18th. The precipitation was unusually light in the eastern part of the state. A moderate snow cover was general over the central and western sections.

MARCH.—The month was cold, averaging colder in the middle and western sections than in the eastern. It was the coldest March since 1913. A storm of blizzard proportions occurred over

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THE WEATHER BY MONTHS—Continued

the eastern part of the state on the 5th and 6th. Another period of general snowfalls and blustery weather prevailed from the 26th to the 31st. By the close of the month there was some concern as to feed shortage in some sections with heavy yard feeding necessary because ranges were snow covered.

APRIL.—The month was cool and dry. Little precipitation occurred during the first 13 days. From the 14th to the 30th light to moderate amounts were reported. The least amounts occurred in the northeastern counties. It was the fourth driest April since records began in the eastern division. Planting, while delayed by the late season, was well under way by the close of the month. Ranges were greening slowly, but they afforded little feed.

MAY.—Warm, with ample precipitation except for small areas in the northern border counties where moisture was inadequate. In some sections in the east portion soil was too wet with the result that much planting was delayed. Over the rest of the state, except for locally heavy showers which did minor crop and property damage, the rainfall averaged moderate. Tornadoes occurred in McIntosh County on the 23d. There were five distinct funnels observed.

JUNE.—This was the second wettest month in the climatological history of North Dakota, and the precipitation in the western and northern sections exceeded all previous records. Twelve stations in the northwestern part of the state reported more than 10 inches. Five counties in the southeastern part of the state had below normal precipitation. Temperatures averaged slightly below normal and light to heavy frosts occurred at many stations on the 6th, but damage was slight. High winds and tornadoes were reported in Logan and LaMoure counties. The weather was very favorable for crops.

JULY.—Temperatures averaged below normal. This July was the fourth driest since 1892 in both the middle and western divisions, while, in contrast, the eastern division was the tenth wettest. The cool weather and above normal sunshine, combined with the copious rains in June, were favorable for maturing crops. Hailstorms were numerous, but the damage was small compared to 1943. Pastures were beginning to dry in the central portion during the latter part of July.

AUGUST.—The month was cool and wet. Temperatures were below normal in all sections with the greatest departures in the western portion. Excessive rains were experienced in the eastern and middle sections from the 25th to the close of the month. Much combining had to be delayed with a deterioration in grade of spring wheat; this was also true of shocked grain. Conditions were excellent for corn. Potatoes in the upper Red River Valley were damaged, some fields standing in water for several days. However, the rains were very beneficial to pastures and late garden truck. Feed was plentiful and livestock were in good condition.

SEPTEMBER.—Temperatures and precipitation were near normal. Killing frost occurred in most places in the northern and western counties on the 23d and again on the 30th, but many stations in the southeastern and south-central parts of the state had no frost during the month. No severe storms were reported. Although small grain was damaged somewhat by wet weather, the crop condition was considerably above average and corn was an excellent crop. Pastures remained green throughout the month and livestock were in good condition.

OCTOBER.—Unusually warm, dry weather prevailed during

the month. Only six other Octobers were warmer. An unusual feature was that the last half of the month averaged warmer than the first half. It was the driest October since state-wide records began in 1892. The average for the month in the western division was only 0.02 inch. No snow fell in the eastern half of the state. It was an excellent month for outdoor work and progress in threshing was very good.

NOVEMBER.—More precipitation occurred during November 1944 than in any previous November. This moisture was mostly in the form of rain and, following a dry October, the moisture was of great value to farm land. There were more foggy days and less sunshine than in any previous month of record. The temperature averaged slightly above normal.

DECEMBER.—Temperatures were moderate and precipitation was very light. Only five stations reported more than 0.25 inch. Many stations had no measurable amounts. It was the least December precipitation recorded since December 1913. Snowfall averaged less than an inch, but there was considerable snow on the ground in some northeastern and southwestern counties. Much feeding of livestock was necessary in those sections, especially in Stark, Billings, and some of the surrounding counties. At the close of the year subsoil moisture was considerably above average.

KILLING FROSTS

STATIONS	Last in Spring	First in Autumn	STATIONS	Last in Spring	First in Autumn
<i>Eastern Div.</i>			Leeds	May 6	Sept. 23
Carrington	May 8	Sept. 23	Linton	May 8	Oct. 8
Cassellton	May 6	Oct. 1	Maddock	May 8	Sept. 23
Cavalier	May 6	Oct. 1	Mandan	May 6	Oct. 8
Cooperstown	May 6	Sept. 23	Max	May 6	Oct. 1
Devils Lake	May 6	Sept. 23	McClusky	May 5	Oct. 8
Edgeley	May 6	Oct. 8	Minot	May 7	Oct. 1
Edmore	May 8	Sept. 23	Mohall	May 8	Sept. 28
Ellendale	May 6	Oct. 8	Napoleon	May 6	Oct. 1
Fargo	May 6	Oct. 9	New Salem	May 5	Oct. 1
Forman	May 6	Oct. 9	Pettibone	May 7	Sept. 23
Fullerton	May 6	Oct. 8	Rolla	May 7	Oct. 2
Grafton	May 6	Oct. 1	Steele	May 8	Sept. 23
Grand Forks	May 7	Oct. 9	Towner	May 8	Sept. 23
Hankinson	May 7	Oct. 9	Turtle Lake	May 7	Oct. 8
Hannah	May 7	Sept. 23	Underwood	May 7	Oct. 8
Hillsboro	May 6	Oct. 9	Velva	May 7	Oct. 8
Jamestown	May 6	Oct. 10	Washburn	May 5	Oct. 10
Kensal	May 8	Sept. 23	Westhope	May 7	Sept. 28
Langdon	May 7	Sept. 23	Willow City	May 6	Oct. 23
Larimore	May 6	Oct. 2	Wilton	May 6	Oct. 1
Lisbon	May 6	Oct. 9	Wishek	May 8	Oct. 1
Mayville	May 7	Oct. 9	<i>Western Div.</i>		
McHenry	May 6	Sept. 23	Almont	May 5	Oct. 1
McLeod	May 8	Oct. 9	Amidon	May 4	Sept. 30
Milnor	May 6	Oct. 8	Bowbells	May 7	Oct. 19
Oakes	May 7	Oct. 1	Bowman	May 5	Oct. 2
Park River	May 7	Oct. 1	Crosby	May 6	Oct. 1
Pembina	May 7	Oct. 1	Dickinson	May 7	Oct. 1
Petersburg	May 7	Sept. 23	Dunn Center	May 7	Sept. 24
Sharon	May 6	Oct. 23	Elbowoods	May 7	Oct. 28
Valley City	May 6	Oct. 9	Epping	May 5	Oct. 19
Wahpeton	May 6	Oct. 9	Fryburg	May 5	Oct. 1
<i>Middle Div.</i>			Golva	May 8	Sept. 21
Ashley	May 6	Oct. 1	Grenora	May 8	Oct. 19
Bisbee	May 7	Sept. 23	Kenmare	May 5	Oct. 1
Bismarck	May 5	Oct. 10	Marmarth	May 8	Oct. 2
Bottineau	May 8	Sept. 23	Nedora	May 8	Oct. 2
Butte	May 7	Oct. 1	Mott	May 7	Oct. 8
Carson	May 7	Oct. 1	New England	May 5	Oct. 1
Center	May 7	Oct. 1	New Hradec	May 7	Oct. 1
Drake	May 6	Oct. 10	Parshall	May 8	Sept. 23
Dunseith	May 7	Sept. 30	Portal	May 5	Oct. 1
Eckman	May 8	Sept. 23	Powers Lake	May 5	Sept. 30
Fessenden	May 4	Oct. 1	Richardton	May 5	Oct. 30
Fort Yates	May 6	Oct. 9	Sanish	May 8	Oct. 23
Foxholm	May 7	Sept. 30	Stanley	May 8	Oct. 23
Garrison	May 7	Oct. 1	Van Hook	May 5	Oct. 19
Granville	May 7	Oct. 1	Watford City	May 5	Oct. 1
Hansboro	May 7	Sept. 23	Williston	May 4	Oct. 1

MONTHLY AMOUNTS OF EVAPORATION—inches, and WIND MOVEMENT—miles, FOR 1944

Station	Data	Apr.	May	June	July	Aug.	Sept.	Seasonal	Average	Observer
Dickinson	Evaporation	2,970	5,053	4,496	7,489	6,362	3,785	30,155	38 years	Agri. Experiment Substa.
	Wind movement	3,540	4,015	3,640	3,065	3,410	2,710	20,380	34.655	
Mandan	Evaporation	2,713	4,867	4,223	6,238	5,478	3,258	26,777	31 years	No. Gr. Plains Field Sta.
	Wind movement	3,948	4,418	3,286	3,504	3,532	2,956	21,644	33.639	

Climatological Data for the Year 1944

Stations	County	Elevation, feet	Temperature (degrees Fahrenheit)						Precipitation (inches)						Number of days				Prevailing direction of wind	
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	With 0.1 in or more precip.	Clear	Pt. cloudy		Cloudy
Eastern Division																				
Carrington	Foster	1,579	47	40.5	102	July 24	-30	Feb. 11	47	21.94	6.23	June	T.	Dec.	21.5	78	164	106	96	nw.
Casselton	Cass	934	49	43.2	97	Aug. 9	-24	Feb. 11	49	27.05	8.70	Aug.	0.10	Oct.	27.6	79	203	91	72	s.
Cavalier	Pembina	894	9	40.6	98	July 24	-24	Feb. 11†	37	28.19	7.11	Aug.	0.12	Apr.	44.5	86	110	141	115	nw.
Cooperstown	Griggs	1,428	48	42.0	97	July 24	-30	Feb. 11	48	20.06	7.34	Aug.	0.00	Oct.	18.4	65	146	72	148	nw.
Devils Lake	Ramsey	1,471	40	40.1	95	July 24	-26	Feb. 11	69	25.26	6.55	Aug.	0.01	Oct.	28.4	105	90	118	158	nw.
Edgeley, 2 mi. S	LaMoure	1,568	44	42.2	97	Aug. 9	-27	Feb. 11†	44	23.01	4.97	Aug.	0.03	Dec.	20.8	77	131	133	102	nw.
Edmore, 1½ mi. W	Ramsey	1,524	21	37.6	96	July 24	-32	Feb. 11	21	22.03	8.73	Aug.	0.01	Oct.	27.5	85	204	69	93	nw.
Ellendale	Dickey	1,457	46	42.3	97	Aug. 9	-28	Feb. 12	46	25.20	4.90	Aug.	0.09	Dec.	25.6	92	152	72	142	nw.
Fargo Airport, 2½ mi. NNW	Cass	895	64	42.4	98	Aug. 9	-22	Feb. 12	64	30.38	8.52	Aug.	0.16	Feb.	30.0	120	83	126	157	s.
Forman	Sargent	1,249	53	43.4	96	Aug. 9	-23	Feb. 11†	53	25.51	7.80	July	0.03	Dec.	17.7	77	187	81	98	n.
Fullerton	Dickey	1,439	47	42.9	97	Aug. 9	-28	Feb. 12	47	24.77	5.23	May	0.15	Dec.	28.9	97	126	117	123	nw.
Grafton	Walsh	827	53	42.2	93	July 24	-21	Feb. 11	53	27.49	8.25	Aug.	T.	Jan.	24.7	78	127	138	101	nw.
Grand Forks, 2 mi. W	Grand Forks	830	54	41.4	96	July 24	-23	Feb. 11	54	29.57	12.16	Aug.	0.08	Feb.	37.4	110	149	123	94	s.
Grand Forks Airport, 2½ mi. W	Grand Forks	832	4	40.6	96	July 24	-24	Feb. 11	4	27.89	12.73	Aug.	0.09	Oct.	42.1	112	92	119	155	s.
Hankinson	Richland	1,068	16	42.8	97	Aug. 9	-24	Feb. 12	16	23.35	4.90	Aug.	0.08	Dec.	27.5	87	177	54	135	nw.
Hannah	Cavalier	1,568	51	38.2	92	July 24	-31	Feb. 11	51	26.70	7.40	Aug.	T.	Oct. †	36.8	58	103	126	137	sw.
Hillsboro	Traill	901	39	42.1	95	Aug. 2	-28	Feb. 12	39	26.11	8.83	Aug.	0.08	Oct.	29.5	97	109	128	129	ne.
Jamestown, 2 mi. SE	Stutsman	1,457	53	42.6	100	Aug. 9	-30	Feb. 12	53	17.12	5.50	Aug.	T.	Dec.	31.3	72	144	93	129	nw.
Jamestown Airport, 2 mi. NE	Stutsman	1,492	4	40.9	99	Aug. 9	-32	Feb. 11	4	18.99	6.99	Aug.	0.03	Dec.	22.5	100	122	106	138	nw.
Kensal, 7 mi. SW	Stutsman	1,440	4	40.6	98	July 24	-34	Feb. 11	4	21.76	7.68	Aug.	T.	Dec.	24.2	80	133	114	119	nw.
Langdon, 1 mi. E	Cavalier	1,615	49	39.0	95	July 24	-29	Feb. 10†	49	23.99	8.07	Aug.	0.10	Jan.	37.5	123	134	127	105	nw.
Larimore	Grand Forks	1,134	52	40.4	96	July 24	-24	Feb. 11	52	20.73	5.85	Aug.	T.	Dec.	27.0	69	167	68	131	nw.
Lisbon	Ransom	1,091	41	43.0	96	Aug. 9	-28	Feb. 12	41	24.77	5.81	July	T.	Dec.	27.7	99	175	34	157	nw.
Mayville	Traill	975	49	42.4	96	July 24	-25	Feb. 12	49	27.03	6.33	June	0.00	Feb.	27.7	81	134	102	130	n.
McHenry, 3 mi. NE	Eddy	1,509	22	39.0	93	July 24†	-33	Feb. 11	22	21.97	6.87	Aug.	0.04	Dec.	22.7	94	138	114	114	sw.
McLeod, 3 mi. E	Ransom	1,075	33	43.2	96	Aug. 9	-30	Feb. 12	33	25.42	6.29	July	0.10	Dec.	29.7	71	204	75	87	sw.
Milnor	Sargent	1,117	5	40.6	96	Aug. 9	-27	Feb. 11	12	37.98	10.61	July	0.00	Feb.	27.3	73	202	115	49	nw.
Oakes	Dickey	1,318	16	41.6	96	Aug. 9	-31	Feb. 12	16	27.78	7.33	July	T.	Dec.	19.0	75	159	53	154	nw.
Park River	Walsh	998	41	39.1	95	July 24†	-24	Feb. 10†	41	22.91	7.21	Aug.	0.00	Oct.	29.2	69	204	70	92	nw.
Pembina Airport, 1 mi. S	Pembina	803	71	39.2	95	July 24	-24	Feb. 15	71	25.89	9.03	Aug.	0.06	Apr. †	31.7	107	78	145	143	nw.
Petersburg	Nelson	1,524	1	39.7	96	July 24	-28	Feb. 11	14	18.19	5.50	Aug.	0.02	Dec.	15.1	82	123	148	95	nw.
Sharon	Steele	1,516	18	40.8	98	July 24	-26	Feb. 11	21	24.64	10.14	Aug.	0.02	Oct.	18.8	105	108	131	127	nw.
Valley City	Barnes	1,229	40	43.3	94	Aug. 9	-23	Feb. 12	40	27.11	9.99	Aug.	0.04	Oct.	30.5	106	174	91	101	nw.
Wahpeton	Richland	962	53	44.2	96	Aug. 9	-27	Feb. 11	53	28.96	8.31	July	0.03	Dec.	24.1	98	138	94	134	nw.
Middle Division																				
Ashley, 1 mi. SE	McIntosh	2,014	49	40.0	98	Aug. 9	-34	Feb. 11	49	14.97	3.53	June	0.08	Feb.	25.9	102	81	135	150	s.
Bisbee	Towner	1,601	42	40.2	95	July 24†	-30	Feb. 11	42	24.73	7.11	June	T.	Oct.	42.5	76	163	82	121	nw.
Bismarck	Burleigh	1,670	70	42.9	99	Aug. 9	-32	Feb. 11†	70	16.96	4.67	June	T.	Dec.	23.4	79	110	112	144	nw.
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	5	42.2	98	Aug. 9	-34	Feb. 11	5	19.40	5.05	Aug.	T.	Dec.	24.8	88	110	112	144	nw.
Bottineau	Bottineau	1,638	53	39.3	94	May 30	-34	Feb. 11	53	27.31	12.03	June	0.04	Oct.	36.0	80	189	55	122	nw.
Butte, 3 mi. WSW	McLean	1,880	20	40.8	90	July 30	-31	Feb. 11	20	24.85	11.55	June	0.00	Oct.	39.4	69	148	99	119	nw.
Carson, 2½ mi. SW	Grant	2,500	33	42.4	102	Aug. 9	-27	Feb. 11	33	20.00	6.31	June	T.	Dec.	26.4	59	157	112	97	nw.
Center	Oliver	2,100	7	41.4	97	July 24†	-39	Feb. 11	7	22.21	7.38	June	0.00	Oct.	44.8	79	112	177	77	nw.
Drake	McHenry	1,634	15	39.8	96	July 24	-32	Feb. 11	15	16.69	5.90	June	0.01	Dec.	25.7	86	183	61	122	nw.
Dunseith, 2 mi. NNE	Rolette	1,682	49	38.8	91	July 24	-27	Feb. 11	49	20.68	7.23	June	0.01	Jan.	31.6	85	180	82	104	nw.
Eckman	Bottineau	1,500	39	39.2	91	July 24†	-38	Feb. 11	39	20.04	10.44	June	0.00	Oct.	23.2	66	137	128	101	nw.
Fessenden	Wells	1,610	33	40.9	95	July 24	-30	Feb. 10	33	19.44	5.22	June	0.00	Oct.	27.9	71	162	118	86	n.
Fort Yates	Sioux	1,670	45	43.4	103	Aug. 9	-40	Feb. 11	45	18.19	5.49	June	0.04	Dec.	22.5	.....	233	64	69	se.
Foxholm, 6½ mi. NE	Ward	1,609	20	40.2	92	July 24†	-31	Feb. 11	24	23.83	10.14	June	0.00	Oct.	29.1	86	142	113	111	nw.
Garrison	McLean	1,911	68	40.6	96	Aug. 9	-34	Feb. 11	68	22.14	6.99	June	0.00	Oct.	38.6	83	119	122	125	sw.
Granville	McHenry	1,504	38	40.6	93	July 24†	-35	Feb. 11	38	21.53	10.06	June	0.00	Oct.	24.7	83	210	72	84	nw.
Hansboro	Towner	1,597	37	38.0	92	July 24†	-32	Feb. 11	37	21.74	8.02	June	0.04	Dec.	32.0	83	172	88	106	nw.
Leeds	Benson	1,515	4	40.3	97	July 24	-29	Feb. 11	4	18.11	5.39	June	0.00	Oct.	32.3	74	114	154	98	sw.
Linton	Emmons	1,711	28	43.1	100	Aug. 9	-42	Feb. 11	28	23.71	6.35	June	0.03	Dec.	28.5	91	129	100	137	nw.
Maddock, 1 mi. E	Benson	1,604	30	40.2	97	July 24†	-37	Feb. 11	30	18.92	4.76	May	0.00	Oct.	23.2	75	106	142	118	nw.
Mandan, 1½ mi. S	Morton	1,750	31	41.6	97	Aug. 9	-32	Feb. 11	31	19.46	5.56	June	0.01	Dec.	28.7	77	158	51	157	sw.
Max	McLean	2,093	16	39.2	95	July 30	-34	Feb. 12	16	18.54	7.17	June	T.	Dec.	36.5	76	163	73	130	nw.
McCluskey	Sheridan	1,943	20	41.6	96	July 24†	-33	Feb. 11	27	15.04	5.54	June	0.00	Oct.	26.1	56	163	113	90	nw.
Minot Airport, 1 mi. N	Ward	1,724	49	40.1	94	July 24	-28	Feb. 11	49	22.69	10.63									

Monthly and Annual Mean Temperatures for the Year 1944, with Departures from the Normal

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.
Eastern Division																										
Carrington	20.7	+14.0	8.4	-0.5	14.8	-8.9	38.4	-1.2	58.0	+4.9	63.6	+0.2	68.7	-0.7	65.2	-1.9	56.6	-0.3	49.6	+5.9	27.5	+0.2	14.4	+1.8	40.5	+1.1
Casselton	22.8	+17.8	12.6	+3.5	22.2	-2.5	41.6	0.0	58.6	+3.9	65.3	+1.4	68.2	-1.7	68.4	+1.3	58.0	+0.1	50.0	+5.3	33.8	+6.8	17.0	+4.2	43.2	+3.3
Cavalier	18.0	.....	7.6	.....	15.0	.....	41.2	.....	58.8	.....	63.0	.....	69.2	.....	66.6	.....	57.2	.....	47.0	.....	30.2	.....	13.0	.....	40.6	.....
Cooperstown	21.9	+17.6	12.2	+4.4	19.0	-5.3	40.4	+0.1	58.6	+4.8	61.9	+1.7	69.4	-0.2	67.6	+0.2	57.4	-0.3	47.8	+3.1	30.4	+3.1	15.3	+2.3	42.0	+2.6
Devils Lake	18.8	+17.0	9.2	+4.1	15.2	-4.6	40.4	+1.6	58.0	+5.4	61.8	-0.1	67.6	+0.2	65.5	+0.7	55.9	0.0	48.4	+6.0	26.8	+2.3	13.4	+3.9	40.1	+3.1
Edgeley	23.6	+14.8	11.5	-1.3	19.8	-7.5	40.2	-2.4	59.3	+4.9	63.5	-0.1	68.0	-1.9	67.2	-0.5	57.2	-1.1	49.4	+3.8	30.4	+1.1	17.3	+2.3	42.2	+0.9
Edmore	16.9	+16.7	7.6	+2.8	14.4	-6.7	37.4	-1.9	55.8	+2.6	59.0	-3.3	64.3	-3.2	62.4	-2.4	52.9	-3.5	44.2	+1.7	25.8	+1.2	11.0	+0.5	37.6	+0.3
Ellendale	22.6	+12.6	10.8	-2.3	19.8	-7.4	40.2	-2.5	59.8	+4.5	63.0	-1.8	68.6	-2.3	67.0	-1.7	57.4	-1.4	49.2	+3.3	31.0	+2.6	18.0	+1.7	42.3	+0.5
Fargo	21.1	+17.3	11.8	+3.7	20.2	-2.5	41.0	+0.4	58.5	+3.4	65.4	+1.0	69.3	+1.2	67.4	+1.3	58.1	-0.1	47.8	+3.3	32.9	+5.8	14.6	+3.1	42.4	+3.2
Forman	22.6	+15.5	12.7	+2.8	21.6	-4.4	40.8	-3.2	60.2	+4.5	65.7	+0.7	70.2	+0.1	68.6	+0.4	58.7	-0.8	49.1	+6.1	32.8	+4.2	18.7	+3.4	43.4	+2.4
Fullerton	23.3	+14.2	11.2	-1.2	21.3	-5.8	41.0	-1.7	60.4	+5.6	64.5	+0.3	68.8	-1.4	67.5	-0.5	57.1	-0.9	48.7	+3.4	31.7	+2.7	19.2	+1.0	42.9	+1.6
Grafton	21.4	+18.8	12.2	+4.9	19.2	-2.5	42.1	+1.5	59.4	+5.3	63.7	0.0	69.0	+0.2	66.6	+0.4	57.6	-0.6	48.6	+4.8	30.4	+5.4	15.6	+4.9	42.2	+3.7
Grand Forks	18.0	+14.4	10.2	+2.5	18.0	-4.5	41.4	+0.1	59.6	+5.4	64.5	+1.1	70.0	+1.5	67.6	+1.6	56.6	-0.3	47.3	+3.6	30.6	+4.8	13.8	+2.8	41.4	+2.7
Grand Forks Airport	17.6	.....	9.6	.....	17.7	.....	40.4	.....	57.8	.....	63.6	.....	68.2	.....	66.4	.....	56.2	.....	45.7	.....	30.2	.....	13.6	.....	40.6	.....
Hankinson	22.8	+14.9	13.0	-1.1	21.1	-7.5	39.5	-4.0	59.0	+1.0	66.8	-0.1	69.3	-2.1	67.2	-3.5	58.0	-2.5	47.8	+1.2	32.2	+3.3	16.4	-1.3	42.8	-0.1
Hannah	17.0	+18.2	5.4	+2.8	14.0	-5.2	39.2	+1.3	56.6	+5.0	60.0	-0.5	65.2	-1.0	63.0	-1.1	54.7	-0.1	46.3	+5.5	26.6	+5.9	10.6	+3.0	38.2	+2.8
Hillsboro	20.4	+15.5	11.6	+1.4	19.8	-5.5	41.0	-1.2	58.1	+3.3	64.6	-0.1	68.6	-2.1	67.2	-1.0	58.0	-1.0	48.0	+2.8	32.2	+4.9	15.8	+7.8	42.1	+2.1
Jamestown	23.0	+15.9	11.0	+1.1	19.8	-4.6	41.0	-0.7	59.6	+5.5	64.5	+0.8	70.4	+0.8	68.0	+1.1	57.8	+0.8	49.4	+4.7	30.3	+3.0	16.8	+2.9	42.6	+2.6
Jamestown Airport	20.9	.....	9.0	.....	17.5	.....	39.9	.....	58.3	.....	62.5	.....	67.6	.....	66.2	.....	56.3	.....	48.2	.....	29.2	.....	14.8	.....	40.9	.....
Kenal	22.0	.....	10.5	.....	17.2	.....	38.3	.....	57.4	.....	62.0	.....	67.4	.....	66.2	.....	55.6	.....	47.8	.....	28.5	.....	15.2	.....	40.6	.....
Langdon	18.2	+18.6	8.0	+3.2	15.4	-4.4	40.5	+2.9	57.2	+5.4	60.6	0.0	66.4	+0.1	63.3	-0.4	54.7	+1.2	46.7	+5.8	26.4	+2.7	11.1	+2.3	39.0	+3.1
Larimore	19.7	+15.9	10.0	+2.3	17.8	-4.9	40.4	+0.2	54.4	+5.0	61.4	-1.5	67.5	-0.6	66.2	+0.3	57.5	+1.1	45.4	+1.3	28.0	+2.2	12.7	+1.2	40.4	+1.9
Lisbon	23.0	+15.4	13.4	+1.8	22.0	-5.3	40.2	-1.9	58.8	+4.0	64.7	+0.3	68.4	-2.0	66.4	-1.4	57.5	-0.6	49.4	+4.7	33.0	+4.2	16.8	+3.8	43.0	+2.0
Mayville	21.4	+15.4	13.1	+3.3	19.7	-5.0	41.6	-0.9	58.4	+3.0	64.5	0.0	68.4	-1.8	67.6	-0.3	57.2	-1.3	49.3	+3.3	32.2	+3.3	16.0	+2.7	42.4	+1.8
McHenry	18.4	+16.9	8.3	+2.9	15.8	-7.2	38.6	-2.0	56.6	+3.9	61.4	-0.4	66.2	-1.9	64.2	-1.5	54.3	-1.5	45.9	+2.6	27.2	+0.6	11.6	+0.8	39.0	+1.1
McLeod	21.8	+13.5	14.0	+1.0	20.9	-6.9	39.6	-4.0	58.4	+2.6	66.9	+1.6	69.7	-1.7	69.5	+1.0	58.2	-1.4	49.6	+3.1	34.6	+4.9	15.6	+0.5	43.2	+1.2
Milnor	19.2	.....	11.0	.....	18.2	.....	38.3	.....	56.3	.....	63.2	.....	67.9	.....	65.8	.....	55.0	.....	45.2	.....	30.8	.....	15.6	.....	40.6	.....
Oakes	20.0	+11.1	9.0	-3.9	19.0	-8.7	38.9	-3.9	58.4	+2.8	63.4	-1.9	67.2	-4.5	65.8	-3.3	56.6	-2.4	48.8	+2.8	32.6	+4.0	18.9	+2.7	41.6	-0.4
Park River	18.4	+15.5	8.4	+0.7	15.8	-7.0	38.7	-1.8	56.3	+2.7	61.2	-1.9	67.2	-1.3	64.2	-2.4	54.6	-2.3	46.5	+2.8	26.2	-0.8	12.2	+1.1	39.1	+0.4
Pembina Airport	16.0	+18.4	6.6	+3.8	14.6	-3.8	40.8	+2.3	57.7	+4.5	61.7	-1.1	67.4	-0.4	64.9	+0.2	55.6	+1.1	45.2	+3.6	28.8	+5.4	11.6	+4.6	39.2	+3.2
Petersburg	19.7	.....	9.9	.....	15.8	.....	38.8	.....	57.0	.....	61.0	.....	67.0	.....	65.1	.....	55.0	.....	46.6	.....	29.0	.....	11.8	.....	39.7	.....
Sharon	20.0	+16.5	10.8	+1.3	17.6	-6.6	39.9	+0.3	57.7	+3.6	63.8	+0.8	68.8	-2.0	65.8	-2.1	55.9	-1.5	47.6	+4.0	29.0	+4.3	13.0	+0.8	40.8	+1.6
Valley City	23.3	+17.2	15.0	+3.5	21.6	-4.7	41.2	-1.2	59.8	+5.2	65.8	+1.7	68.8	-1.3	66.9	-0.8	58.0	-0.8	49.4	+4.3	31.8	+7.8	17.9	+3.4	43.3	+2.5
Wahpeton	24.2	+15.5	15.4	+3.0	22.8	-4.8	41.6	-2.6	59.4	+3.1	66.8	+1.0	70.2	-0.7	69.2	+0.5	59.2	-0.8	49.8	+2.8	34.6	+5.6	18.2	+2.4	44.2	+2.0
Middle Division																										
Ashley	21.2	+12.5	8.4	-3.0	14.8	-10.1	38.8	-3.6	58.2	+4.0	61.0	-2.2	66.7	-3.0	66.0	-1.2	55.2	-2.7	47.8	+3.4	28.2	+0.2	14.5	-0.3	40.0	-0.6
Bisbee	19.2	+17.4	9.4	+2.9	15.4	-7.1	40.2	-0.5	58.0	+5.3	62.0	-0.1	67.3	-0.1	64.8	-0.9	56.4	-0.3	47.9	+4.1	27.9	+1.5	14.4	+4.7	40.2	+2.2
Bismarck	25.1	+17.1	12.5	+0.9	18.7	-6.5	43.0	-0.1	60.6	+5.8	63.4	-0.8	69.6	-0.9	67.9	-0.3	58.0	-0.1	51.4	+6.2	26.6	-1.9	18.0	+2.3	42.9	+1.8
Bismarck Airport	23.6	+17.3	10.4	+1.9	17.8	-4.1	42.1	+1.7	60.2	+7.2	63.2	-0.3	69.4	0.0	67.4	+0.7	57.4	+0.1	50.1	+6.5	26.0	0.0	17.8	+5.0	42.2	+3.2
Bottineau	19.0	+17.6	9.9	+5.0	13.8	-7.0	41.6	+2.6	59.2	+6.9	61.6	-0.2	66.2	-1.4	62.6	-2.3	54.9	-0.6	47.2	+5.8	24.8	+1.2	10.7	+2.4	39.3	+2.5
Butte	22.1	+14.2	11.1	-2.0	15.5	-10.9	40.6	-0.7	58.4	+3.6	60.9	-1.6	66.7	-3.3	63.0	-2.2	56.6	-0.9	50.6	+2.5	26.0	-0.5	15.6	+0.8	40.8	+0.2
Carson	24.5	+14.4	14.0	-0.5	16.6	-10.4	42.0	-0.5	59.8	+3.8	62.6	-1.1	68.5	-2.3	67.6	-1.0	57.6	-0.5	51.2	+6.7	25.8	-4.0	12.2	+1.6	42.4	+0.7
Center	22.8	.....	13.2	.....	17.6	.....	40.6	.....	57.8	.....	60.9	.....	67.2	.....	66.3	.....	57.8	.....	49.1	.....	26.1	.....	16.2	.....	41.4	.....
Drake	19.4	+13.9	8.2	-2.2	13.4	-11.3	39.8	-0.6	58.8	+4.1	61.6	-2.2	67.8	-3.8	66.0	-1.6	55.8	-1.8	49.1	+6.0	24.3	-1.6	13.9	-1.5	39.8	-0.3
Dunseith	20.4	+17.6	6.8	+0.1	13.4	-7.1	39.2	-0.3	57.3	+4.5	59.															

Monthly and Annual Precipitation for the Year 1944, with Departures from the Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual			
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.		
Eastern Division																												
Carrington	0.06	-0.36	0.31	-0.17	0.65	-0.04	0.34	-0.99	5.43	+2.94	6.23	+2.78	1.48	-1.13	3.51	+1.44	1.08	-0.34	0.33	-0.70	2.52	+1.97	T.	-0.41	21.94	+4.99		
Cassellton	0.35	-0.18	0.15	-0.44	1.05	+0.29	0.72	-1.03	4.51	+1.71	3.16	-0.43	4.26	+1.57	8.70	+6.16	1.07	-0.83	0.10	-1.25	2.83	+2.15	0.15	-0.37	27.05	+7.35		
Cavalier	0.15	-0.52	0.27	-0.24	2.41	+1.65	0.12	-1.27	1.17	-1.09	4.74	+1.66	4.53	+1.89	7.11	+4.60	2.20	-0.12	0.40	-0.89	4.92	+4.18	0.17	-0.52	28.19	+9.33		
Colgate	0.10	-0.38	0.11	-0.38	0.52	-0.28	0.55	-1.11	4.45	+1.75	3.12	-0.36	3.47	+0.94	5.35	+2.87	0.99	-0.84	0.00	-1.11	3.12	+2.45	T.	-0.53	21.78	+3.02		
Cooperstown	0.17	-0.34	0.11	-0.41	0.90	+0.19	0.29	-1.10	2.12	-0.41	3.89	+0.62	1.42	-1.17	7.34	+4.73	1.54	-0.22	0.00	-1.08	2.19	+1.55	0.09	-0.49	20.06	+1.87		
Courtneyay	0.04	-0.57	0.15	-0.43	0.40	-0.44	0.55	-0.88	2.32	-0.11	5.48	+2.28	1.46	-1.16	6.79	+4.39	1.55	-0.29	T.	-1.15	2.08	+1.51	T.	-0.67	20.82	+2.48		
Devils Lake	0.12	-0.35	0.12	-0.38	0.98	+0.20	0.72	-0.80	4.00	+1.97	5.80	+2.24	2.90	+0.33	6.55	+4.07	1.59	-0.04	0.01	-1.24	2.36	+1.64	0.11	-0.43	25.26	+7.21		
Edgeley	0.20	-0.29	0.10	-0.38	0.76	-0.07	1.64	-0.11	5.52	+2.96	2.33	-1.34	4.21	+1.64	4.97	+2.62	0.89	-0.77	0.10	-0.92	2.26	+1.74	0.03	-0.46	23.01	+4.62		
Edmore	0.12	-0.37	0.20	-0.21	1.93	+0.34	0.31	-0.95	1.11	-0.75	4.36	+1.25	2.27	-0.57	8.73	+6.40	1.59	-0.26	0.01	-0.97	2.25	+1.63	0.05	-0.49	22.03	+5.05		
Ellendale	0.63	-0.17	0.48	-0.01	0.90	0.05	1.69	-0.17	7.80	+2.33	3.91	+0.40	4.28	+0.87	4.84	+2.19	4.90	+2.13	1.42	-0.26	0.67	-0.39	2.29	+1.73	0.09	-0.37	25.20	+6.24
Fargo	0.60	-0.07	0.16	-0.53	1.26	+0.25	1.17	-1.01	4.70	+1.81	3.41	-0.64	6.95	+3.52	8.52	+5.63	1.40	-0.82	0.17	-1.52	1.55	+0.95	0.19	-0.53	30.38	+7.04		
Forman	0.21	-0.24	0.42	-0.08	0.53	-0.27	1.78	-0.23	3.91	+0.96	3.84	+0.24	7.80	+4.92	3.87	+1.12	0.46	-1.61	0.88	-0.47	1.78	+1.21	0.03	-0.53	25.51	+5.02		
Fullerton	0.60	-0.10	0.47	-0.24	1.20	+0.14	1.42	-0.72	5.23	+2.24	2.94	-0.97	4.48	+1.60	4.23	+1.69	1.05	-0.91	0.63	-0.70	2.37	+1.66	0.15	-0.62	24.77	+3.07		
Gackle	0.55	+0.11	0.12	-0.33	0.67	-0.18	0.86	-0.68	5.98	+3.40	2.20	-1.27	0.43	-2.25	4.34	+1.99	2.75	+0.59	0.20	-0.94	3.89	+3.20	0.02	-0.51	27.49	+9.31		
Grafton	T.	-0.50	0.12	-0.45	2.04	+1.34	0.09	-1.25	1.96	-0.06	5.69	+2.44	2.48	-0.28	8.25	+5.73	1.10	-0.82	0.16	-1.20	2.99	+2.20	0.27	-0.35	29.57	+10.17		
Grand Forks	0.39	-0.14	0.08	-0.48	1.28	+0.50	0.78	-0.88	3.35	+0.85	4.83	+1.55	2.18	-0.60	12.16	+9.54	1.10	-0.82	0.16	-1.20	2.99	+2.20	0.27	-0.35	29.57	+10.17		
Grand Forks Airport	0.37	.....	0.14	.....	1.43	.....	0.62	.....	3.13	.....	4.18	.....	1.93	.....	12.73	.....	0.65	.....	0.09	.....	2.39	.....	0.23	.....	27.89	.....	
Hankinson	0.33	-0.14	0.20	-0.34	0.98	+0.16	1.77	-0.24	3.16	+0.30	4.86	+1.28	4.07	+1.20	4.90	+2.15	0.97	-1.13	0.64	-0.73	1.39	+0.74	0.08	-0.44	23.35	+2.81		
Hannah	0.26	-0.44	0.16	-0.43	1.33	+0.61	0.25	-0.87	4.05	+1.94	5.81	+2.40	3.63	+1.25	7.40	+5.03	1.50	-0.61	T.	-1.07	2.26	+1.57	T.	-0.59	26.70	+8.79		
Hillsboro	0.26	-0.25	0.10	-0.45	1.29	+0.53	0.83	-1.05	2.63	-0.32	4.82	+1.40	2.92	-0.28	8.83	+6.08	1.53	-0.54	0.08	-1.26	2.68	+1.92	0.14	-0.50	26.11	+5.84		
Jamestown	0.21	-0.34	0.30	-0.29	1.27	+0.37	0.55	-1.15	2.31	-0.46	1.61	-1.89	1.93	-0.77	5.50	+2.95	0.77	-0.90	0.02	-1.27	2.65	+1.98	T.	-0.65	17.12	-2.42		
Jamestown Airport	0.20	.....	0.23	.....	0.87	.....	0.44	.....	3.00	.....	1.78	.....	2.26	.....	6.99	.....	0.83	.....	0.09	.....	2.27	.....	0.03	.....	18.99	.....	
Kensal	0.12	.....	0.11	.....	0.84	.....	0.54	.....	2.31	.....	3.16	.....	1.36	.....	7.68	.....	2.42	.....	0.00	.....	3.22	.....	T.	.....	21.76	.....	
Langdon	0.10	-0.51	0.27	-0.36	2.20	+1.42	0.16	-1.07	1.95	-0.04	3.97	+0.73	1.57	-0.93	8.07	+5.60	1.73	-0.50	0.15	-0.88	3.64	+2.91	0.18	-0.45	23.99	+5.92		
Larimore	0.12	-0.48	T.	-0.55	1.63	+0.82	0.26	-1.34	3.33	+0.60	5.14	+1.58	0.38	-2.56	5.85	+3.14	1.44	-0.91	0.15	-1.29	2.73	+1.91	T.	-0.56	20.73	+0.36		
Lisbon	0.25	-0.34	0.30	-0.29	0.58	-0.15	1.22	-0.71	4.71	+1.94	3.20	-0.70	5.81	+2.91	5.42	+2.52	0.96	-1.04	0.53	-0.71	1.79	+1.16	T.	-0.51	24.77	+4.08		
Mayville	0.20	-0.19	0.00	-0.44	0.98	+0.26	0.63	-0.92	2.76	+0.04	6.33	+2.96	1.31	-1.40	10.23	+7.68	1.66	-0.40	T.	-1.26	2.72	+2.01	0.21	-0.31	27.03	+8.06		
McHenry	0.14	-0.28	0.08	-0.37	1.06	+0.37	0.48	-0.89	2.58	+0.27	4.25	+0.78	2.70	-0.10	6.27	+4.55	1.25	-0.18	0.03	-1.02	2.49	+1.95	0.04	-0.45	21.97	+4.63		
McLeod	0.55	-0.01	0.33	-0.23	0.57	-0.21	0.66	-1.33	4.73	+1.72	3.46	-0.37	6.29	+3.44	5.23	+2.53	0.55	-1.48	0.40	-0.98	2.55	+1.92	0.10	-0.36	25.42	+4.64		
McVille	0.10	.....	0.16	.....	1.61	.....	0.46	.....	1.79	.....	4.99	.....	0.63	.....	8.85	.....	1.70	.....	T.	.....	2.29	.....	T.	.....	22.58	.....	
Milnor	0.67	+0.19	0.00	-0.53	0.85	+0.08	1.95	+0.01	7.61	+4.65	4.85	+1.03	10.61	+7.82	6.72	+3.99	0.50	-1.60	1.42	+0.06	2.65	+2.03	0.15	-0.39	37.98	+17.34		
Oakes	0.48	+0.01	0.27	-0.19	0.46	-0.34	0.96	-0.41	4.58	+1.87	7.00	+3.36	7.33	+4.48	3.05	+0.38	1.16	-0.60	0.73	-0.58	1.76	+1.20	T.	-0.50	27.78	+8.18		
Park River	T.	-0.49	0.04	-0.38	1.22	+0.56	0.32	-1.00	1.73	-0.21	5.35	+2.09	1.84	-0.77	7.21	+4.91	1.48	-0.67	0.00	-1.18	3.72	+3.09	T.	-0.51	22.91	+5.44		
Pembina Airport	0.15	-0.48	0.25	-0.37	1.62	+0.82	0.06	-1.20	1.16	-1.03	5.87	+2.68	2.81	-0.40	9.03	+6.74	0.99	-1.19	0.95	-0.25	2.94	+2.19	0.06	-0.56	25.89	+7.75		
Petersburg	0.03	-0.41	0.09	-0.41	0.95	+0.22	0.40	-0.99	2.17	-0.27	3.84	+0.34	0.96	-2.00	5.50	+3.14	1.99	+0.02	0.03	-1.14	2.21	+1.57	0.02	-0.42	16.19	-0.39		
Sharon	0.07	-0.40	0.08	-0.40	0.99	+0.37	0.60	-0.88	2.17	-0.57	5.42	+1.81	1.13	-1.56	10.14	+7.77	1.54	-0.51	0.02	-1.27	2.40	+1.68	0.08	-0.40	24.64	+5.64		
Valley City	0.43	-0.01	0.31	-0.15	0.91	+0.22	0.38	-1.18	3.54	+0.88	2.81	-0.57	4.69	+1.17	9.99	+7.71	1.01	-0.79	0.04	-1.14	2.86	+2.23	0.09	-0.40	27.11	+8.77		
Wahpeton	0.35	-0.10	0.13	-0.34	0.66	-0.06	1.91	-0.17	2.47	-0.23	5.45	+1.87	8.31	+5.26	5.95	+3.08	1.39	-0.83	0.31	-1.13	2.00	+1.31	0.03	-0.47	28.96	+8.29		
Middle Division																												
Ashley	0.15	-0.29	0.08	-0.37	0.38	-0.45	0.70	-0.91	1.83	-0.57	3.53	+0.11	1.60	-1.06	3.02	+0.58	0.96	-0.51	0.19	-0.87	2.44	+1.89	0.09	-0.41	14.97	-2.86		
Bisbee	0.09	-0.36	0.31	-0.05	1.79	+1.08	0.51	-0.68	3.57	+1.42	7.11	+3.75	1.62	-1.08	4.08	+1.73	1.69	0.00	T.	-0.99	3.60	+3.13	0.36	-0.07	24.73	+7.88		
Bismarck	0.21	-0.17	0.35	-0.04	0.39	-0.48	1.15	-0.64	2.24	+0.01	4.67	+1.44	0.67	-1.61	3.56	+1.93	1.02	-0.42	0.12	-0.79	2.58	+2.10	T.	-0.48	16.96			

Monthly and Annual Precipitation for the Year 1944, with Departures from the Normal—Continued

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
<i>Western Division—Con.</i>																										
Golva	0.52	+0.06	0.24	-0.16	0.58	-0.17	0.57	-0.61	2.54	+0.28	6.34	+2.75	0.18	-1.62	2.42	+0.82	1.62	+0.35	0.02	-0.88	1.20	+0.74	0.06	-0.41	16.29	+1.15
Grenora	0.15	-0.35	0.07	-0.49	1.06	+0.38	0.75	-0.28	2.46	+0.24	8.34	+5.38	0.27	-1.57	1.94	+0.44	0.36	-0.87	0.00	-0.79	1.12	+0.57	0.01	-0.64	16.53	+2.02
Halliday	0.54	.....	0.39	.....	0.54	.....	0.94	.....	1.82	.....	9.26	.....	1.60	.....	3.47	.....	2.08	.....	0.00	.....	2.95	.....	T.	.....	23.53	.....
Hettinger	0.80	+0.44	0.27	-0.16	0.28	-0.38	0.99	-0.07	1.68	-0.60	6.63	+3.47	1.94	-0.34	1.08	-0.46	1.65	+0.35	T.	-0.71	1.34	+0.94	0.10	-0.27	16.76	+2.21
Kenmare	0.08	-0.27	0.52	+0.13	1.23	+0.58	1.16	+0.24	1.12	-0.86	10.67	+7.78	0.56	-1.74	3.10	+1.19	0.60	-0.97	0.00	-0.96	0.62	+0.08	T.	-0.43	19.66	+4.77
Marmarth	1.24	+0.82	0.34	-0.07	1.03	+0.30	1.05	-0.02	1.96	-0.33	6.79	+3.66	1.49	-0.42	1.70	+0.08	1.55	+0.29	0.04	-0.75	1.41	+1.04	0.13	-0.27	18.73	+4.33
Medora	0.55	+0.01	0.29	-0.10	0.26	-0.50	0.58	-0.57	2.26	+0.08	7.70	+4.28	0.18	-1.71	2.51	+0.99	1.65	+0.33	T.	-0.78	2.66	+2.18	0.02	-0.46	18.66	+3.75
Mott	0.97	+0.48	0.11	-0.37	0.33	-0.53	0.62	-0.60	2.00	-0.26	6.71	+3.46	0.45	-1.68	1.51	-0.25	1.44	+0.07	0.06	-0.77	2.00	+1.54	T.	-0.48	16.20	+0.61
New England	0.99	+0.53	0.77	+0.28	0.89	+0.08	0.64	-0.56	1.35	-0.82	8.69	+5.53	0.27	-1.86	1.89	+0.31	1.84	+0.47	0.10	-0.69	2.76	+2.31	T.	-0.40	20.19	+5.18
New Hradec	0.70	.....	0.23	.....	0.61	.....	0.54	.....	1.73	.....	7.84	.....	1.15	.....	2.91	.....	2.17	.....	0.02	.....	3.81	.....	0.07	.....	21.78	.....
Parshall	0.44	+0.10	0.22	-0.17	0.37	-0.21	0.86	-0.21	2.87	+0.70	6.93	+3.44	0.18	-2.04	2.78	+0.94	1.42	-0.07	0.01	-0.74	1.33	+0.94	T.	-0.41	17.41	+2.27
Portal	T.	-0.40	0.53	+0.15	1.37	+0.76	0.96	+0.02	1.60	-0.47	12.39	+9.30	0.39	-1.68	3.60	+1.64	0.80	-0.66	0.00	-0.84	0.57	+0.05	T.	-0.45	22.21	+7.42
Powers Lake	0.25	-0.27	0.63	+0.18	0.55	-0.15	0.58	-0.56	1.48	-0.67	9.50	+6.21	1.52	-0.75	1.90	+0.22	1.44	+0.15	0.00	-1.05	0.43	-0.06	0.07	-0.47	18.35	+2.78
Richardton	0.46	+0.08	0.31	-0.10	0.71	-0.01	0.89	-0.33	4.76	+2.30	8.80	+5.33	0.04	-2.42	1.52	-0.32	1.85	+0.53	0.01	-0.78	6.11	+5.59	0.01	-0.41	25.47	+9.46
Ryder	0.70	+0.37	0.23	-0.25	0.30	-0.24	1.08	-0.03	3.82	+1.73	8.34	+5.23	0.29	-1.94	3.58	+1.51	1.57	+0.05	0.00	-0.80	1.39	+0.86	0.10	-0.36	21.40	+6.13
Sanish	0.50	+0.02	0.30	-0.15	0.79	+0.21	1.05	-0.07	3.77	+1.82	6.43	+3.06	0.22	-1.80	1.75	+0.15	0.36	-0.98	0.00	-0.77	1.69	+1.16	T.	-0.45	16.86	+2.20
Stanley	0.17	.....	0.69	.....	1.03	.....	1.43	.....	3.01	.....	9.07	.....	0.53	.....	4.96	.....	0.49	.....	0.00	.....	1.26	.....	0.06	.....	22.70	.....
Tagus	0.24	-0.12	0.10	-0.32	0.30	-0.32	1.00	-0.15	1.68	-0.31	6.07	+3.02	0.19	-1.86	2.49	+0.71	1.04	-0.36	T.	-0.78	1.38	+0.85	0.03	-0.39	14.52	-0.03
Tioga	0.27	-0.16	0.55	+0.18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.00	-0.81	0.48	+0.02	T.	-0.44	.....	.....
Trotters	0.70	+0.27	0.22	-0.16	0.98	+0.21	0.54	-0.51	2.39	+0.16	4.79	+1.46	1.29	-0.47	1.71	+0.17	2.70	+1.47	T.	-0.80	1.60	+1.15	0.07	-0.33	16.99	+2.62
Van Hook	0.38	.....	0.25	.....	0.25	.....	1.90	.....	2.75	.....	7.34	.....	0.23	.....	2.30	.....	0.60	.....	0.00	.....	1.69	.....	T.	.....	17.69	.....
Watford City	0.46	-0.01	0.35	-0.08	1.38	+0.69	0.68	-0.49	2.07	+0.08	9.50	+6.35	0.86	-1.14	1.28	-0.32	1.76	+0.45	0.00	-0.87	1.20	+0.71	0.04	-0.49	19.58	+4.88
Willrose	0.07	-0.42	0.47	+0.01	0.78	+0.16	0.72	-0.24	1.07	-0.83	9.40	+6.30	0.85	-1.13	1.91	+0.10	0.51	-0.68	T.	-0.80	0.32	-0.18	T.	-0.52	16.10	+1.77
Williston	0.26	-0.28	0.54	+0.13	1.32	+0.63	0.42	-0.78	0.94	-1.12	7.88	+4.45	1.73	-0.16	2.35	+0.88	1.10	+0.01	T.	-0.86	1.33	+0.75	0.03	-0.55	17.90	+3.10

The departures from normal precipitation for stations with 15 years or more of record are computed from a normal or "standard mean," adjusted to a uniform 45-year period; for stations of 10 to 14 years, the means for the period of record are used.

T. Precipitation 0.005 inch or less.
ITALICS, Data interpolated.

CHART SHOWING METEOROLOGICAL STATIONS



○ Section Center

● Weather Bureau Office

○ Substation

□ Hydroclimatic Substation

[WBO, Minneapolis, 5-30-45-1500]

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Nat Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIV BISMARCK, N. D., JANUARY 1945 No. 1

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Temperatures were mostly below zero at the beginning of the month and again at the close, with several weeks of warmer weather between. Only a few stations reported minimum temperatures below zero between the 10th and 25th and many stations had no minimum temperature lower than 20° below zero during the month. The western division averaged nearly 5° warmer than the eastern division. Although the precipitation averaged slightly below normal there were more than the usual number of rainy days and the greatest number of cloudy and foggy days ever recorded in January. There were less than the usual number of blizzards and no severe storms were reported. Snowfall was about average, but the snow cover in some areas, particularly in Stark and the surrounding counties, was above average and much feeding was necessary in these areas. Heavy frost on wires, followed by light rain and sleet, caused considerable communication trouble to telephone and telegraph lines on the 19th.

TEMPERATURE

The mean temperature for the state was 12.7°, or 5.9° above the 1892-1945 average for January. The mean temperature for the eastern division was 10.6°; for the middle division, 12.3°; and for the western division, 15.1°. The highest mean temperature was 19.8° at Bowman, and the lowest, 5.6° at Hannah, making a range in mean temperature of 14.2°. The absolute range was 82°, from 51° at Medora on the 24th, to -31° at Bottineau, Edmore, and Hannah on the 8th. The average daily excess in temperature for the state since January 1, 1945, is 5.9°.

PRECIPITATION

The average precipitation for the state was 0.41 inch, or 0.06 inch less than the 1892-1945 average for January. In the eastern division the average amount was 0.40 inch; in the middle division, 0.37 inch; and in the western division, 0.45 inch. The greatest monthly amount reported was 1.15 inches at Grafton; the least, 0.08 inch at Foxholm. The greatest amount recorded in any 24 consecutive hours was 0.52 inch at Grafton on the 12-13th. The accumulated excess in precipitation for the state since January 1, 1945, is 0.06 inch. The average snowfall was 5.6 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.65	31	29.69	11	9.7	43	n.w.	13	88	88	81	86	34	1556
Devils Lake...	30.59	31	29.64	11	7.9	24	n.w.	2	79	81	79	82	32	1725
Fargo.....	30.63	31	29.59	11	10.5	30	n.w.	3	89	91	79	87	31	1679
Williston.....	30.63	1	29.57	14	6.5	29	w.	11	84	86	81	79	43	1549

† And other dates.

SILENT OBSERVERS

WITH DEEP REGRET WE RECORD THEIR PASSING

Mr. C. J. Hoof passed away January 28, 1945 after serving as cooperative observer at Napoleon continuously for 46 years. He and his father recorded the weather for 55 years, an all-time record at one location in North Dakota. The work will be continued by Mr. J. H. Hoof, son of Mr. C. J. Hoof, at the same location.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs.....				1	1	3	12	9	3	3	27	5	34	7	8	31	11	33	59	57	28	6	1	1	2	8	8	3	6	4	4
Lunar halos.....						1															1	1								2	
Solar halos.....			1		1																									3	1
Sleet.....										1	1	1	6	2					1	12	7					1	1	1			
Thunderstorms.....																															

COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	3.3	58	-52	0.31	0.41	0.25	0.32	2.8	4	15	8	8
1893...	0.8	52	-48	0.33	0.44	1.11	0.99	3.4	7	11	11	9
1894...	0.6	60	-47	0.38	0.40	0.38	0.39	3.6	4	13	9	7
1895...	-2.9	42	-46	0.53	0.69	0.47	0.56	5.5	5	16	8	9
1896...	5.3	58	-42	0.75	0.77	0.80	0.77	6.6	5	9	9	13
1897...	3.6	49	-38	0.91	0.64	0.76	0.77	7.5	5	11	9	11
1898...	14.6	69	-32	0.14	0.12	0.07	0.11	1.1	2	15	8	8
1899...	5.2	55	-41	0.29	0.20	0.26	0.25	2.4	3	13	9	9
1900...	15.4	70	-30	0.27	0.27	0.12	0.22	2.0	3	15	9	7
1901...	7.7	68	-39	0.29	0.29	0.26	0.28	3.0	4	14	8	9
1902...	12.7	51	-40	0.17	0.03	0.23	0.14	1.4	2	17	7	7
1903...	9.4	56	-37	0.72	0.58	0.68	0.66	6.7	5	13	8	10
1904...	3.6	50	-52	0.41	0.36	0.42	0.40	4.0	5	15	6	10
1905...	0.9	48	-40	0.26	0.30	0.41	0.32	2.9	3	15	8	8
1906...	12.2	60	-38	0.75	0.72	0.61	0.69	6.9	4	14	6	11
1907...	-6.2	45	-45	1.77	1.13	1.05	1.32	14.5	8	12	8	11
1908...	17.0	70	-41	0.21	0.16	0.34	0.24	1.9	2	17	8	6
1909...	3.5	53	-48	0.60	0.32	0.37	0.43	4.3	4	14	8	9
1910...	9.4	49	-35	0.30	0.21	0.59	0.37	4.1	3	16	8	7
1911...	-1.0	56	-43	0.86	0.96	0.69	0.84	8.5	6	11	8	12
1912...	-4.6	63	-52	0.34	0.34	0.36	0.35	3.6	4	16	6	9
1913...	3.2	60	-54	0.51	0.40	0.43	0.45	4.6	5	12	9	10
1914...	14.8	62	-38	0.56	0.48	0.40	0.48	4.9	4	12	8	11
1915...	5.8	51	-43	0.39	0.24	0.25	0.29	3.4	3	12	9	10
1916...	-6.4	49	-56	1.58	1.24	1.26	1.36	15.1	6	13	8	10
1917...	1.7	47	-46	0.82	0.69	0.65	0.72	8.6	5	13	8	10
1918...	0.5	48	-41	0.41	0.43	0.58	0.47	5.0	5	12	8	11
1919...	18.7	66	-44	0.24	0.21	0.10	0.18	1.7	2	17	8	6
1920...	2.7	49	-44	1.26	0.96	0.68	0.97	10.0	5	10	9	12
1921...	15.9	52	-31	0.29	0.20	0.22	0.24	2.5	2	13	9	9
1922...	7.0	55	-46	0.68	0.36	0.42	0.49	5.2	5	12	9	10
1923...	10.1	56	-35	0.59	0.43	0.54	0.52	6.0	5	9	9	13
1924...	2.6	61	-42	0.30	0.20	0.18	0.23	2.5	3	14	9	8
1925...	8.6	52	-35	0.33	0.18	0.22	0.24	2.5	3	11	10	10
1926...	16.3	55	-30	0.31	0.34	0.49	0.38	4.1	4	13	8	10
1927...	10.1	60	-44	0.50	0.36	0.41	0.42	4.3	4	14	8	9
1928...	13.0	50	-41	0.21	0.19	0.19	0.20	2.3	3	14	9	8
1929...	-4.8	42	-42	0.76	0.48	0.63	0.62	9.2	6	13	8	10
1930...	-1.9	41	-43	0.26	0.22	0.40	0.29	2.7	4	12	9	10
1931...	21.4	68	-31	0.15	0.15	0.14	0.15	1.4	2	15	8	8
1932...	9.5	50	-34	0.47	0.62	0.59	0.56	6.3	4	12	7	12
1933...	11.8	53	-30	0.92	0.70	0.79	0.80	10.0	7	12	7	12
1934...	15.8	54	-36	0.29	0.14	0.17	0.20	2.0	3	11	9	11
1935...	3.3	60	-44	0.55	0.29	0.39	0.41	4.9	6	8	10	13
1936...	-5.8	43	-44	0.51	0.48	0.69	0.56	6.9	7	11	8	12
1937...	-8.3	38	-44	1.04	0.55	0.42	0.67	9.0	6	13	8	10
1938...	9.5	50	-40	0.36	0.42	0.67	0.48	6.1	6	10	9	12
1939...	15.0	55	-32	0.56	0.32	0.54	0.47	6.0	6	8	10	13
1940...	3.4	48	-39	0.10	0.11	0.10	0.10	1.4	3	13	9	9
1941...	11.0	53	-33	0.80	0.56	0.25	0.54	6.3	5	10	7	14
1942...	18.3	60	-35	0.09	0.08	0.10	0.09	1.0	2	16	7	8
1943...	-1.4	45	-44	0.42	0.74	1.02	0.73	9.4	7	10	8	13
1944...	21.8	61	-26	0.28	0.33	0.51	0.37	4.8	3	16	8	7
1945...	12.7	51	-31	0.40	0.37	0.45	0.41	5.6	5	8	8	15
Period	6.8	70	-56	0.52	0.43	0.46	0.47	5.1	4	13	8	10

Climatological Data for January 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Carrington	Foster	1,579	48	9.5	+2.8	36	24	-26	9	0.17	-0.25	0.07	17	3.5	5	12	8	16	nw.	Soo Line Agent.
Casselton	Cass	934	50	11.9	+6.9	36	24	-21	8	0.30	-0.23	0.12	9	4.8	5	12	6	13	n.	C. Hayford.
Cavalier	Pembina	894	38	7.9	.....	37	23	-26	8	0.70	+0.03	0.22	12-13	8.5	7	0	7	24	n.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	.....	.....	.....	.....	0.12	-0.36	0.12	10	3.0	1	13	12	6	nw.	O. M. Jensen.
Cooperstown	Griggs	1,423	49	10.6	+6.3	41	24	-25	8	0.44	-0.07	0.15	13	6.3	4	8	2	21	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	15	.....	.....	.....	.....	.....	.....	0.53	-0.08	0.08	5†	7.0	8	.....	.....	.....	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	9.4	+7.6	37	24	-24	8	0.39	-0.08	0.17	16-17	4.8	10	5	8	18	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	45	13.7	+4.9	45	11	-20	8	0.38	-0.11	0.19	20	4.5	6	6	9	16	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	22	9.0	+8.8	35	24	-31	8	0.18	-0.31	0.07	7†	4.0	4	9	6	16	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	13.5	+3.5	41	11†	-20	2	0.78	+0.32	0.22	20	8.8	8	7	3	21	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	65	10.8	+7.0	37	24	-22	8	0.33	-0.34	0.07	5-6	4.3	9	4	7	20	n.	U. S. Weather Bureau.
Foran	Sargent	1,249	54	13.5	+6.4	43	11	-20	8	0.11	-0.34	0.06	5	1.6	2	9	4	18	nw.	Helge Dyste.
Fullerton	Dickey	1,439	48	14.5	+5.4	40	11	-19	8	0.71	+0.01	0.21	20	6.3	11	4	6	21	nw.	F. O. Alin.
Gackle	Logan	1,951	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	Jack Dixon.
Grafton	Walsh	827	54	9.4	+6.8	35	23†	-26	8	1.15	+0.65	0.52	12-13	14.6	4	16	9	6	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	55	8.8	+5.2	35	23	-26	8	0.60	+0.07	0.14	6-7	8.6	8	4	15	12	nw.	University of N. Dak.
Grand Forks Aprt., 2½ mi. W	Grand Forks	832	5	7.8	.....	34	23†	-26	8	0.74	.....	0.25	13	10.6	9	3	7	21	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	13.1	+5.2	42	11	-20	9	0.12	-0.35	0.07	10	1.6	5	9	0	22	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	5.4	+6.6	34	24	-31	8	0.40	-0.30	0.15	17	6.3	5	8	3	20	w.	A. E. Prior.
Hillsboro	Trall	901	40	10.4	+5.5	37	11†	-22	8	0.34	-0.17	0.10	13	6.9	6	5	9	17	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	54	12.5	+5.4	38	24	-21	8	0.39	-0.16	0.17	9	6.3	5	12	3	16	nw.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	5	11.7	.....	37	11†	-21	8	0.20	.....	0.04	9	2.9	10	6	7	18	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	11.2	.....	38	24	-21	8	0.27	.....	0.20	17	3.9	4	7	2	21	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	50	6.2	+6.6	35	23†	-30	8	0.65	+0.04	0.28	12-13	6.1	6	7	9	15	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	53	8.4	+4.6	39	24	-29	9	0.85	+0.25	0.45	27	9.9	8	8	2	21	nw.	Chas. Ouradnik.
Lisbon	Ransom	1,091	42	14.0	+6.4	42	11	-21	8	0.32	-0.27	0.15	6	7.0	4	8	0	23	nw.	J. O. Halverson.
Mayville	Trall	975	50	11.4	+5.4	36	24†	-23	8	0.41	+0.02	0.13	17	5.4	8	2	13	16	nw.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	23	8.3	+6.8	38	24	-27	8	0.19	-0.23	0.05	9†	4.0	6	8	5	18	nw.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	34	14.0	+5.7	47	11	-20	8†	0.25	-0.31	0.12	9	3.8	3	10	5	16	nw.	J. G. Carlson.
McVie	Nelson	1,467	4	.....	.....	.....	.....	.....	.....	0.18	.....	0.10	10	2.7	2	2	7	.....	nw.	A. M. Casad.
Milnor	Sargent	1,117	13	10.8	.....	45	11	-25	8	0.20	-0.28	0.10	31	3.0	4	12	15	4	nw.	E. W. Wilson.
Oakes	Dickey	1,318	17	14.2	+5.3	41	11	-20	8	0.28	-0.19	0.09	5	3.8	6	9	3	19	nw.	F. H. Murray.
Park River	Walsh	998	42	6.9	+4.0	36	24	-27	8	0.35	-0.14	0.12	12-13†	4.7	4	11	4	16	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	72	6.2	+8.6	34	23	-28	5	0.47	-0.16	0.16	26	6.3	10	2	10	19	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	T. M. Rykken.
Sharon	Steele	1,516	22	9.4	+5.9	38	24	-26	8	0.34	-0.13	0.17	17	3.7	6	5	8	18	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,229	41	12.9	+6.8	38	11†	-22	8	0.32	-0.17	0.12	9	5.0	7	9	3	19	nw.	I. C. Robertson.
Wahpeton	Richland	962	54	13.9	+5.2	42	11	-22	8	0.29	-0.16	0.09	9	4.5	4	4	8	19	nw.	W. J. Cavanaugh.
Average for Eastern Division				10.6	+5.7	47	11	-31	8	0.40	-0.12	0.52	12-13	5.5	6	7	7	17	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	50	12.1	+3.4	40	11	-19	1	0.37	-0.07	0.14	19-20	5.1	9	3	7	21	nw.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	43	10.0	+8.2	37	25	-26	8	0.57	+0.12	0.30	9	6.0	3	5	4	22	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	71	15.8	+7.8	41	11†	-17	31	0.40	+0.02	0.15	19-20	7.3	6	4	8	19	nw.	U. S. Weather Bureau.
Bismarck Airt., 2½ mi. SE	Burleigh	1,650	6	14.7	+8.4	40	11	-19	31	0.39	-0.06	0.17	13-14	4.9	11	4	8	19	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	54	9.0	+7.6	37	23	-31	8	0.32	-0.09	0.16	8	3.2	3	13	1	17	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	21	13.1	+5.2	36	24	-19	8	0.40	+0.04	0.15	14	4.5	3	6	6	19	nw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	34	16.4	+6.3	46	24	-19	1	0.48	+0.12	0.25	7-8	6.3	4	11	9	11	nw.	J. W. Evans.
Center	Oliver	2,100	8	14.0	.....	42	24	-31	42	0.42	-0.13	0.13	13-14	9.0	6	9	8	14	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	10.4	+4.9	37	24	-19	1	0.22	-0.17	0.39	9	3.0	3	10	16	5	nw.	Geo. A. Pauls.
Dunseith, 2 miles NNE	Rolette	1,682	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	Hubert Downs.
Eckman	Bottineau	1,500	40	11.0	+7.9	45	24	-24	8	0.25	-0.11	0.10	9	3.2	4	9	7	15	nw.	E. R. Sherman.
Fessenden	Wells	1,610	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	John V. Zuber.
Fort Yates	Sioux	1,670	46	18.0	+8.4	49	17	-19	2	0.30	-0.09	0.15	14†	4.0	2	12	11	8	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	25	11.8	+5.0	48	24	-20	31	0.08	-0.36	0.03	7-8†	1.6	4	10	8	13	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	69	12.4	+4.5	40	24	-19	8†	0.70	+0.33	0.31	13-14	13.5	9	8	6	17	w.	Mae H. Vorachek.
Granville	McHenry	1,504	39	12.6	+7.5	47	24	-19	8	0.16	-0.22	0.08	13	2.5	3	16	5	10	nw.	Fred Roble.
Hansboro	Towner	1,597	38	7.4	+6.8	37	24	-26	8	0.45	-0.16	0.14	6-7	11.2	5	5	9	17	nw.	W. E. Disher.
Harvey	Wells	1,596	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	Orville Hoksich.
Leeds	Benson	1,515	5	9.8	.....	34	24	-25	8	0.22	.....	0.09	10	3.6	4	6	7	18	nw.	John Dalmage.
Linton	Emmons	1,711	29	16.0	+6.7	44	17	-21	2	0.62	+0.28	0.29	14	7.0	6	12	2	17	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	31	10.2	+5.6	35	24	-24	8	0.33	-0.09	0.11	17	4.7	4	5	9	17	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	32	13.8	+5.2	41	12	-19	31	0.60	+0.23	0.32	14	8.6	6	11	1	19	sw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	17	10.7	+6.2	36	13	-20	1	0.40	+0.05	0.13	15	5.6						

Climatological Data for January 1945—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Epping	Williams	2,224	37	13.0	+7.8	40	12	-23	1	0.24	-0.18	0.18	14	5.3	3	17	1	13	nw.	T. Beachler.	
Fairfield, 9½ miles N	Billings	2,650	17							0.37	-0.07	0.20	12-13	2.7	4	16	5	10	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N	Billings	2,790	28	17.0		43	13†	-20	1	0.47	+0.01	0.11	5	4.4	5	14	6	11	nw.	Verne King.	
Golva, 1 mile E	Golden Valley	2,781	5	17.9	+5.8	43	24	-19	1	0.40	-0.06	0.15	13-14	4.9	8	6	9	16	w.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	37	13.4	+8.5	42	11	-23	1	0.37	-0.13	0.23	14	4.5	2	14	5	12	nw.	L. D. Nielson.	
Hallday	Dunn	2,073	4							0.29		0.12	19-20	6.0	4	5	17	9	nw.	John Kisse.	
Hettinger	Adams	2,675	39	16.7	+3.0	46	24	-20	1	0.60	+0.24	0.32	20	7.9	4	10	10	11	nw.	A. W. Anderson.	
Kenmare	Ward	1,799	14	12.4	+6.6	48	24	-20	8	0.21	-0.14	0.07	9	3.4	9	15	6	10	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	37	19.2	+5.7	43	13	-23	1	0.74	+0.32	0.23	7-8	8.4	6	12	7	12	nw.	S. P. Grane.	
Medora	Billings	2,271	31	19.7		51	24	-18	1†	0.56	+0.02	0.23	13	5.7	5	11	8	12	sw.	Harry Roberts.	
Mott	Hettinger	2,424	39	18.6	+8.4	45	24	-20	31	0.33	-0.16	0.13	19	4.8	5	16	4	11	nw.	P. G. Wick.	
New England	Hettinger	2,621	54	18.6	+5.1	48	24	-18	31	0.82	+0.36	0.34	19	9.8	4	14	7	10	nw.	F. S. Sleight.	
New Hradec, 1 mile E	Dunn		4	16.5		40	12†	-18	1	0.71		0.30	19-20	6.1	8	13	7	11	w.	Peter F. Fieck.	
Parshall	Mountrail	1,929	31	12.0	+5.7	39	11†	-25	31	0.31	-0.03	0.15	14	6.6	6	5	18	8	sw.	C. E. Schubert.	
Portal	Burke	1,954	32	9.4	+6.4	40	24	-24	1†	0.29	-0.11	0.15	9	5.2	4	11	6	14	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	41	11.4	+3.3	42	24	-24	1	0.26	-0.26	0.10	14	5.2	5	9	11	11	nw.	E. J. Lewis.	
Richardton, 1½ miles N	Stark	2,467	30	17.1	+6.0	39	12†	-18	1	0.49	+0.11	0.20	7-8†	5.5	3	8	11	12	w.	Assumption Abbey.	
Ryder	Ward	2,108	17							0.35	+0.02	0.23	13-14	4.6	5	13	4	14	nw.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	20	12.2	+7.1	40	24	-25	31	0.78	+0.30	0.50	14	9.3	5	4	13	14	.....	H. J. Bugge.
Stanley	Mountrail	2,258	8	8.9		36	11	-27	31	0.72		0.33	13	11.3	5	12	14	5	w.	Leroy Edwards.	
Tagus	Mountrail	2,179	17							0.26	-0.10	0.09	12-13	3.3	6	14	6	11	nw.	Geo. N. Pilgard.	
Tioga	Williams	2,279	17							0.50	+0.07	0.35	13-14	5.5	3	8	12	11	w.	Morris J. Pederson.	
Trotters	Golden Valley		20							0.46	+0.03	0.15	19	5.4	7	5	16	10	sw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	5	13.8		43	17	-24	29	0.66		0.29	13-14	11.2	6	9	9	13	nw.	H. Glenn Sims.	
Watford City	McKenzie	2,084	33	16.3	+6.5	42	11†	-20	1	0.39	-0.08	0.14	14	5.0	4	12	14	5	w.	J. C. Zeller.	
Wildrose	Williams	2,258	16							0.55	+0.06	0.35	14	7.9	4	15	5	11	sw.	Jonathan Winkjer.	
Williston	Williams	1,878	67	15.0	+8.6	42	24	-23	31	0.47	-0.07	0.17	5	5.9	8	8	8	15	w.	U. S. Weather Bureau.	
Average for Western Division				15.1	+5.8	51	24	-27	31	0.45	-0.01	0.50	14	5.8	5	11	8	12	nw.		
Average for the State				12.7	+5.9	51	24	-31	8	0.41	-0.06	0.52	12-13	5-6	5	8	8	15	nw.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
 † Trace, precipitation 0.005 inch or less.
 ‡ And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for January 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum..	-5	19	3	8	2	15	18	1	27	26	40	34	36	29	30	22	32	28	27	27	24	28	33	34	26	25	18	12	4	4	11	20.6	
	Minimum..	-19	-18	-17	-4	-2	2	-4	-17	0	16	20	22	20	16	20	16	12	6	22	18	11	14	6	6	7	7	-3	-12	-12	-10		3.6	
Bismarck Airport	Maximum..	-2	18	5	5	6	18	15	4	30	29	40	35	39	35	31	28	38	27	26	24	26	34	37	37	31	27	21	12	6	7	8	22.5	
	Minimum..	-14	-12	-6	-3	1	3	0	-15	4	20	27	17	28	24	15	23	15	12	21	17	17	18	12	7	11	11	10	-5	-12	-12	-19	6.9	
Bottineau	Maximum..	0	10	1	4	4	9	8	16	17	26	29	28	23	28	26	33	30	29	28	25	31	33	37	35	33	27	21	18	22	11	18	21.3	
	Minimum..	-25	-28	-24	-26	-29	-15	-10	-31	-26	-1	6	10	5	15	16	17	21	21	14	8	7	7	7	11	13	7	-13	-25	-12	-9		-3.2	
Carson	Maximum..	-2	21	4	7	7	19	18	12	37	35	40	40	41	37	37	34	38	38	28	25	25	30	39	46	34	29	25	14	7	10	12	25.4	
	Minimum..	-19	-16	-12	-5	-1	3	6	-16	0	22	22	28	28	24	12	25	21	21	19	16	5	8	21	16	13	14	12	5	-13	-15	-11	7.5	
Crosby	Maximum..	-7	9	15	3	4	14	13	0	28	26	39	34	36	35	27	34	30	26	25	20	28	28	34	35	30	24	4	2	2	8	20.1		
	Minimum..	-22	-17	-3	-14	-7	1	-1	-23	-2	10	10	15	22	22	2	20	8	10	13	2	14	7	15	16	15	14	3	-10	-17	-18	-27	1.9	
Devils Lake	Maximum..	-7	8	-3	-2	9	9	6	13	17	30	17	28	22	28	23	29	27	27	19	25	27	30	37	25	20	9	8	-7	8	14	16.0		
	Minimum..	-16	-14	-10	-14	-13	-2	-16	-24	-12	2	17	11	10	7	22	19	22	23	14	9	10	12	14	11	12	5	3	-9	-9	-6	6	2.7	
Dickinson Airport	Maximum..	-2	16	11	14	11	26	15	7	35	31	37	40	38	36	33	34	36	34	25	20	24	32	35	37	29	28	25	13	2	7	12	23.9	
	Minimum..	-18	-11	-6	3	4	1	-2	-9	-2	14	29	23	27	22	15	26	19	17	18	14	8	15	20	18	16	20	11	-6	-11	-9	-12	8.2	
Dunn Center	Maximum..	0	15	11	12	11	17	14	6	34	35	39	38	39	35	34	34	37	33	26	24	26	31	40	41	34	30	25	13	6	9	9	24.5	
	Minimum..	-19	-14	-9	-5	-1	4	0	-16	-1	18	25	21	26	25	6	18	17	5	18	10	11	13	23	14	16	11	10	3	-13	-11	-21	5.9	
Fargo Airport	Maximum..	-2	14	3	1	1	10	12	4	11	13	36	17	23	22	26	23	29	31	29	27	28	35	37	25	24	11	14	8	9	15	17.8		
	Minimum..	-14	-15	-9	-12	-8	0	-12	-22	-13	-5	12	11	14	12	11	16	20	28	24	20	13	9	14	10	15	3	-1	0	0	0	-1	3.9	
Fessenden	Maximum..	-6	11	7	3	-1	10	11	4	21	24	33	25	35	26	31	28	32	30	28	20	25	28	35	38	29	20	10	2	7	7	13	19.0	
	Minimum..	-16	-15	-10	-16	-8	-3	-1	-21	-8	5	20	10	10	13	19	16	23	18	19	11	13	10	20	13	10	9	5	-7	-16	-9	2	3.7	
Fullerton	Maximum..	6	20	10	4	1	12	17	7	21	20	40	35	37	22	28	27	35	33	28	29	31	34	39	31	25	20	13	7	7	14	22.0		
	Minimum..	-13	-16	-8	-9	-3	-3	-7	-19	-8	4	18	20	15	13	19	22	20	23	21	15	18	17	11	19	13	6	2	-5	-5	4	7.0		
Garrison	Maximum..	-7	15	2	1	2	14	13	1	26	28	38	31	35	35	28	30	34	24	27	31	35	40	32	25	20	9	4	9	9	10	20.6		
	Minimum..	-17	-12	-8	-9	-5	-1	-3	-19	1	18	27	12	26	17	1	23	13	10	12	12	18	13	15	13	13	12	5	-12	-14	-13	-19	4.2	
Golva	Maximum..	-2	20	16	22	21	37	31	10	37	38	40	41	41	40	38	35	38	31	20	25	35	39	43	35	28	25	13	-6	17	18	28.6		
	Minimum..	-19	-15	-6	7	-3	1	0	-6	3	5	34	22	24	22	14	23	18	15	18	10	-3	20	18	12	16	22	13	-4	-11	-13	-15	7.2	
Grafton	Maximum..	4	10	8	5	3	6	6	1	7	8	29	21	20	20	24	28	30	31	21	29	29	35	34	35	26	12	11	8	9	15	17.6		
	Minimum..	-15	-12	-10	-12	-22	-5	-7	-26	-19	13	6	3	5	3	15	12	20	25	15	13	11	15	17	8	11	10	-3	-3	-3	-3	2	1.2	
Grand Forks Airport	Maximum..	-4	10	1	-6	-2	8	10	9	8	10	31	13	21	20	25	24	28	32	29	23	28	27	34	34	21	25	7	9	6	8	14	15.6	
	Minimum..	-16	-15	-12	-20	-22	-3	-16	-26	-18	-14	8	1	8	6	9	10	19	27	17	9	6	12	14	8	12	1	-2	0	-6	-2	-1	-0.1	
Jamestown Airport	Maximum..	-6	15	1	0	0	10	14	-3	16	19	37	20	34	21	27	26	32	30	26	28	24	29	35	37	27	24	15	12	7	7	12	18.6	
	Minimum..	-16	-14	-10	-12	-5	-1	-9	-21	-8	8	17	15	7	14	19	17	22	22	19	19	15	17	13	9	16	2	-3	-5	-6	-5	6	4.8	
Kenmare/	Maximum..	-3	9	2	3	1	13	6	11	24	33	40	37	38	36	31	30	40	26	23	23	33	35	38	48	38	30	12	9	5	9	14	22.2	
	Minimum..	-19	-19	-9	-14	-14	-7	1	-20	-17	11	15	16	20	19	8	6	20	12	14	7	5	15	15	21	17	15	5	-3	-14	-12	-17	2.5	
Langdon	Maximum..	-1	5	-2	6	7	7	3	5	5	8	8	8	26	24	21	18	24	23	27	28	26	22	25	30	35	30	26	12	4	8	19	15.3	
	Minimum..	-17	-20	-16	-19	-28	-14	-11	-30	-20	-17	8	6	5	6	17	13	18	21	10	9	12	7	11	6	9	0	-11	-8	-14	-6	2	2.8	
Narmarth	Maximum..	3	24	26	22	38	40	28	15	40	37	36	40	43	41	35	36	38	36	33	30	25	35	38	35	32	31	25	19	11	12	18	29.7	
	Minimum..	-23	-19	-4	8	18	20	9	-2	5	5	21	21	24	31	21	31	18	11	23	13	-8	18	16	9	10	10	19	11	-10	-15	-20	8.7	
Minot Airport	Maximum..	-8	11	-2	3	0	10	12	-1	18	28	36	29	33	34	27	29	32	23	25	21	26	31	36	41	35	22	15	4	5	10	10	19.0	
	Minimum..	-21	-12	-9	-12	-7	0	-9	-18	-3	10	18	17	15	17	8	21	14	14	15	12	17	10	20	21	18	12	4	-9	-11	-12	-12	4.1	
Mott	Maximum..	-5	21	18	17	12	28	21	14	39	37	42	43	43	38	38	37	33	42	32	24	28	38	40	45	39	30	25	18	12	13	14	28.9	
	Minimum..	-18	-15	-8	5	3	3	0	-5	-5	19	26	23	29	27	13	28	20	17	20	17	5	14	23	10	16	11	15	8	-12	-10	-20	8.4	
Pembina Airport	Maximum..	-6	5	-3	10	10	4	5	-11	3	6	23	12	18	18	23	24	27	29	28	18	28	30	34	27	20	21	9	9	3	6	11	13.2	
	Minimum..	-15	-18	-12	-21	-28	-4	-22	-25	-22	-13	3	0	10	11	16	14	19	25	12	9	13	14	14	10	7	0	-8	-7	-6	1	-1	0.8	
Sharon	Maximum..	-2	7	2	5	4	18	8	-1	7	10	33	20	28	19	25	29	28	30	27	26	26	28	33	38	25	20	11	10	8	9	14	17.0	
	Minimum..	-16	-17	-13	-14	-19	-4	-8	-26	-17	-1	8	8	9	8	9	8	15	18	26	15	14	14	14	16	6	15	2	-3	-4	-4	-4	4	1.7
Steele	Maximum..																																	
	Minimum..																																	
Valley City	Maximum..	3	14	9	0	0	9	13	4	14	16	38	32	34	20	26	25	32	32	28	28	26	29	33	38	35	25	19	13	8	8	16	20.2	
	Minimum..	-12	-14	-8	-10	-6	-2	4	-20	-13	5	12	15	13	12	1	19	20	26	25	17	13	15	17	17	15	7	19	-3	7	-4	-2	5	5.6
Wahpeton	Maximum..	11	16	17	4	2	9	16	10	11	11	42	37	29	24	25	25	28	32	32	30	29	32	36	38	38	23	16	13	13	10	16	22.1	
	Minimum..	-12	-13	-7	-11	-10	-3	7	-22	-11	2	7	13	14	15	12	15	17	24	27	23	21	13	16	10	15	16	-3	4	0	0	-3	5.7	
Williston	Maximum..	-2	14	10	7	9	17	14	6	38	30	40	39	37	39	31	36	38	32	26	27	32	37	40	42	36	28	19	11	6	6	13	24.5	

Daily Precipitation for January 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James Red.					T.	.02				.01			.03					.07			.04											0.17
Casselton	Red.						.04	.01		.12				.07					.06														0.30
Cooperstown	Sheyenne		T.					.08		.08				.15				T.	.13														0.44
Courtenay	James					.08	.05	T.		.07	.05			.08					.07	.08		.05											0.53
Devils Lake ^{1 5}	Devils Lake	T.	T.	T.	T.	.01	.01	.01		.06	T.	T.	.08	.03	T.	T.	.01	.16	T.	T.	.01												0.39
Edgeley	James					.02	T.	T.		.09				.02					.04			.19											0.38
Edmore	Devils Lake						.07	.07		.02				.02																			0.18
Elleudale	James					.07	.09	T.		.16				T.	.06	T.		.11			.22												0.78
Fargo ^{1 5}	Red.	T.	T.	T.	T.	.04	.03	.03	T.	.07	.01	T.		.04	T.			.04	T.	T.	T.												0.33
Forman	Sheyenne					.06	.05							Sheyenne																			0.11
Fullerton	James		T.			.07	.13	T.	T.	.09					.03			.08			.21	T.											0.71
Gackle	do																																
Grafton	Red.		T.	T.		T.		.13		T.				.52				T.	.30	T.													1.15
Grand Forks Airport ³	do	T.	T.	T.	T.	.03	.03	.01		.05	T.	T.		.25					.17	T.	T.	.03											1.15
Hankinson ²	do					.01	.01				.07			.01	T.						.02												0.12
Hannah	Pembina							.02	.14					.02				.15															0.40
Hillsboro	Red.		T.			T.	.05	.06		.02	T.			.10				.07		T.	T.	.02											0.34
Jamestown Airport ³	James	T.			.01	.03	.01	T.		.04	T.	T.	.02	T.	T.	T.		.03	T.	T.	.02												0.20
Langdon	Pembina		.01			.02	.10							.28				.10		T.													0.65
Larimore	Red.					.03	.04			.04				.03				.16															0.85
Lisbon	Sheyenne					.15				.08				.04				.05															0.32
Mayville	Red.					T.	.07	.05		.03	T.	T.	T.	.06				.13		T.	.02												0.41
McHenry	James					T.	.02	.01		.05	T.			T.				.05		T.	.05												0.19
McLeod	Sheyenne					.10	T.			.12				T.				.03															0.25
Oakes ²	James					.09	.06	T.		.04				.03				.03		T.	T.												0.28
Park River	Red.					T.	.08			T.				.12				.03															0.35
Pembina Airport ³	do	T.	T.	T.		T.	.04	.02		.03	T.	.03	T.	.14				.02	T.	T.	.01												0.47
Petersburg	do																																
Sharon	do		T.			.01	.02	.05		.03	T.	T.		.06				.17		T.	T.												0.34
Valley City	Sheyenne					T.	.04	.02	T.	.12				.05				.03		T.	T.												0.32
Wahpeton	Red.					T.	.05	T.	T.	.09	T.			.07				.08	T.														0.29
Middle Division																																	
Ashley ³	Missouri					T.	.01	T.	.04	T.	.01	T.		T.	.10	T.	.01	.01		.11	.04	T.											0.37
Bisbee	Devils Lake													.18																			0.57
Bismarck Airport ^{1 5}	Missouri	T.				T.	.02	.04	.01	T.				.02	.15	T.	.01	.01		.07	.02	T.											0.39
Bottineau ²	Mouse						T.			.16				.11																			0.32
Butte	do					T.	.12	T.		.13	T.			T.	.15		T.																0.40
Carson	Heart					T.			.25					.03					.05	.15													0.48
Center	Missouri					.07	T.	T.	.03					.03	.13				T.	.12													0.42
Drake ²	Mouse	T.	T.			T.	.05			.09				T.	.08				T.	T.													0.22
Dunseith	do																																
Eckman	do								.05		.10			.05																			0.25
Fessenden	James					.04			.04	.08				.04				.02															0.30
Fort Yates	Missouri					T.		T.						.15					.15														0.08
Foxholm	Mouse					.01	T.		.03	T.	.06			.03	.16				T.	.07													0.70
Garrison ³	Missouri					.05	.12	T.	.05	T.	.05			.15	.03				T.	T.	.07												0.16
Granville	Mouse					T.	T.	T.		.05				.08	.03																		0.45
Hansboro	Devils Lake								.14					.10																			0.62
Linton	Missouri	T.	T.			.01	.05	T.	.04	.10				.29				T.	.08	.15													0.33
Maddock	Sheyenne					T.	T.	T.		.10				.08	T.	T.	T.	.11	T.	T.	.04												0.60
Mandau ²	Missouri					.01	.08	T.	.01	T.	.10			.32	T.	T.	T.	.11	T.	T.	.07												0.40
Max ²	do					.02				.01	.10			.04		.13	T.	T.		T.	.18												0.52
McClusky	do					.23				T.	.08			.05																			0.29
Minot Airport ³	Mouse					.02	.02	T.	T.	.09	T.			.06	.03	.03				.02	T.												0.37
Mohall	do					T.	T.	.04		.07				.11	.04																		0.29
Napoleon ²	Missouri					.02	.03		.02	.10				T.	.03	T.		.05		.10													0.37
New Salem	Heart					T.	.02	.02	.04					.14					.02	.15													0.37
Pettibone	James					.07	.07			.08				.02				.04		.02	.10												0.44
Rolla	Devils Lake					T.	.04	.08		T.	.06			.14				.09	.20														0.69
Rugby	Mouse									.18																							0.18
Seifridge	Missouri																																

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Flat West

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

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CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIV BISMARCK, N. D., FEBRUARY 1945 No. 2

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GENERAL SUMMARY

February was warm and dry. The first half of the month was considerably above normal, but the last half averaged about normal. The coldest period occurred between the 15th and 19th. Precipitation in the eastern half of the state was above normal, but in the central and western portions the moisture averaged only slightly more than 50% of the normal. This is the third month of subnormal precipitation, but November was unusually wet. Snow on the ground at the close of the month was mostly light, but with the greatest amounts in the eastern and south-western parts of the state where much feeding of livestock was necessary since much of the snow cover began early in November. No severe storms were reported. Livestock are in fair to good condition.

TEMPERATURE

The mean temperature for the state was 15.1°, or 5.2° above the 1892-1945 average for February. The mean temperature for the eastern division was 13.2°; for the middle division, 14.8°; and for the western division, 17.4°. The highest mean temperature was 22.2° at Medora, and the lowest, 9.4° at Hannah, making a range in mean temperature of 12.8°. The absolute range was 81°, from 52° at Medora on the 8th, to -29° at Ashley on the 18th. The average daily excess in temperature for the state since January 1, 1945, is 5.6°.

PRECIPITATION

The average precipitation for the state was 0.36 inch, or 0.10 inch less than the 1892-1945 average for February. In the eastern division the average amount was 0.62 inch; in the middle division, 0.23 inch; and in the western division, 0.23 inch. The greatest monthly amount reported was 1.89 inches at Ellendale; the least, 0.02 inch at Fessenden. The greatest amount recorded in any 24 consecutive hours was 0.75 inch at Milnor on the 14-15th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 0.16 inch. The average snowfall was 4.6 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.65	18	29.48	8	10.7	31	nw.	9	88	87	74	76	56	1352
Devils Lake...	30.65	18	29.34	8	9.4	33	nw.	9	82	78	78	79	49	1478
Fargo.....	30.68	18	29.40	8	12.0	34	nw.	9	91	91	80	85	57	1440
Williston.....	30.62	25	29.45	12	8.0	29	nw.	9	83	82	60	66	63	1308

† And other dates.

SILENT OBSERVERS

The Weather Bureau reports with sincere regret the death on February 11, 1945, of Rev. T. M. Rykken, Cooperative Observer at Petersburg since 1930. Rev. Rykken's reports were prompt, well rendered, and most useful to the Weather Bureau.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs.....	4	14	29	6	2	3	...	...	...	1	3	2	15	2	...	1	2	5	8	2	3	...	3	1	1	1	3	...	...	...	...
Lunar halos...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Solar halos...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sleet.....	2	3	...	1	1	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thunderstms...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	10.0	62	-45	0.59	0.77	0.37	0.58	4.9	4	14	7	8
1893...	-0.3	52	-41	1.01	0.51	0.22	0.58	5.7	4	12	7	9
1894...	8.0	55	-54	0.28	0.23	0.16	0.22	2.3	2	14	9	5
1895...	5.9	65	-40	0.33	0.41	0.33	0.36	3.6	4	13	7	8
1896...	14.3	64	-50	0.56	0.29	0.38	0.41	4.3	3	12	9	8
1897...	6.1	52	-29	1.14	1.05	1.30	1.16	11.5	7	12	7	9
1898...	13.3	65	-40	0.46	0.46	0.46	0.46	4.5	3	13	8	7
1899...	0.4	60	-34	0.22	0.16	0.22	0.20	1.9	3	14	8	6
1900...	1.3	46	-48	0.20	0.55	0.66	0.47	4.5	4	12	9	7
1901...	7.1	60	-48	0.32	0.30	0.31	0.31	2.9	3	15	7	6
1902...	12.1	51	-31	0.73	1.10	1.12	0.98	6.7	6	10	6	12
1903...	3.1	46	-33	0.48	0.25	0.41	0.38	3.7	3	19	4	5
1904...	-2.1	52	-49	0.81	0.56	0.69	0.69	7.6	5	13	6	10
1905...	8.2	64	-42	0.25	0.31	0.37	0.31	2.9	2	19	4	5
1906...	9.8	57	-46	0.20	0.07	0.28	0.18	1.4	2	13	8	7
1907...	10.7	58	-38	0.36	0.21	0.42	0.33	2.8	3	15	7	6
1908...	13.8	62	-49	1.56	0.68	0.87	1.04	10.1	5	12	7	10
1909...	9.6	56	-34	0.28	0.36	0.37	0.34	3.7	4	11	7	10
1910...	3.4	56	-34	0.57	0.40	0.81	0.59	5.6	4	14	7	7
1911...	7.3	55	-50	0.84	0.74	0.52	0.70	8.0	3	15	8	5
1912...	11.8	48	-38	0.19	0.18	0.09	0.15	1.7	2	10	9	10
1913...	8.5	64	-33	0.08	0.09	0.09	0.09	1.0	2	12	9	7
1914...	1.0	57	-44	0.34	0.28	0.40	0.34	3.8	3	12	8	8
1915...	17.4	50	-47	1.32	0.27	0.26	0.62	6.1	3	9	5	14
1916...	6.4	55	-20	0.41	0.45	0.58	0.48	4.8	4	14	8	7
1917...	-0.7	61	-39	0.84	0.58	0.55	0.66	7.1	5	10	8	10
1918...	10.8	60	-48	0.20	0.16	0.29	0.22	2.3	3	13	9	6
1919...	7.7	58	-41	0.68	0.73	0.44	0.62	6.5	5	10	8	10
1920...	12.5	53	-40	0.38	0.25	0.28	0.30	3.2	3	11	9	9
1921...	19.9	64	-36	0.52	0.39	0.25	0.39	3.8	3	11	10	7
1922...	0.7	45	-33	1.41	1.17	1.00	1.19	12.8	5	13	6	9
1923...	4.1	48	-39	0.78	0.64	0.51	0.64	7.2	4	13	7	8
1924...	20.3	67	-40	0.39	0.43	0.35	0.39	4.2	3	14	6	9
1925...	16.5	62	-27	0.48	0.30	0.08	0.29	3.6	3	10	9	9
1926...	22.3	58	-39	0.47	0.44	0.31	0.41	3.7	4	9	9	10
1927...	13.3	50	-19	0.49	0.31	0.27	0.36	3.1	4	12	7	9
1928...	18.8	59	-31	0.13	0.06	0.15	0.11	1.2	2	14	8	7
1929...	2.8	44	-19	0.30	0.28	0.30	0.29	3.3	4	12	8	8
1930...	21.7	63	-44	1.41	1.15	0.97	1.18	11.7	6	11	8	9
1931...	28.0	62	-30	0.34	0.20	0.31	0.28	2.9	2	14	6	8
1932...	13.6	69	-31	0.30	0.37	0.30	0.32	4.3	3	12	9	8
1933...	7.9	58	-45	0.25	0.26	0.34	0.28	3.3	3	13	8	7
1934...	19.5	61	-30	0.08	0.04	0.07	0.06	0.7	1	13	8	7
1935...	24.0	63	-25	0.21	0.24	0.15	0.20	1.9	2	13	7	8
1936...	-12.9	43	-60	0.90	0.70	0.50	0.70	9.1	6	12	8	9
1937...	6.8	55	-35	0.83	0.40	0.25	0.49	6.6	4	12	9	7
1938...	7.2	60	-35	0.71	0.63	0.71	0.68	8.6	5	11	7	10
1939...	-0.8	51	-46	0.85	0.60	0.45	0.63	9.7	5	13	8	7
1940...	15.0	52	-29	0.63	0.59	0.60	0.61	7.8	7	5	8	16
1941...	12.2	57	-40	0.23	0.18	0.24	0.22	2.8	3	12	8	8
1942...	14.1	57	-30	0.19	0.30	0.58	0.36	4.6	5	6	9	13
1943...	15.1	62	-32	0.75	0.42	0.33	0.50	6.4	5	11	9	8
1944...	11.2	50	-43	0.19	0.34	0.34	0.29	4.3	4	13	7	9
1945...	15.1	52	-29	0.62	0.23	0.23	0.36	4.6	4	12	8	8
Period	9.9	69	-60	0.54	0.43	0.42	0.46	5.0	4	12	8	8

NAT.
HIST.

Climatological Data for February 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Carrington	Foster	1,579	48	11.3	+2.4	42	27	-18	18†	0.13	-0.35	0.13	13	2.0	1	19	6	3	nw.	Soo Line Agent.
Casselton	Cass	934	50	14.8	+5.7	42	8	-17	17†	0.63	+0.04	0.30	12	10.0	3	21	2	5	n.	C. Hayford.
Cavalier	Pembina	894	38	10.5	.....	45	8	-18	17	0.11	-0.40	0.11	12-13	2.5	1	3	12	13	s.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	45	8	.....	.....	0.17	-0.32	0.10	20	5.0	2	14	11	3	n.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	14.0	+6.2	45	8	-23	18	0.28	-0.24	0.28	12	4.2	1	10	9	9	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	15	.....	.....	45	8	.....	.....	0.33	-0.25	0.33	12	4.0	1	12	9	7	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	12.2	+7.1	42	8	-17	17	0.35	-0.15	0.29	12	5.0	4	9	8	11	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	45	14.1	+1.3	43	8	-20	18	0.75	+0.27	0.31	12	6.0	6	16	5	7	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	22	10.4	+5.6	39	8	-22	18	0.06	-0.35	0.06	13	1.0	1	19	5	4	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	13.8	+0.7	45	8	-20	18	1.89	+1.40	0.40	12	16.6	9	12	8	8	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	65	13.6	+5.5	38	8	-19	17	0.87	+0.18	0.29	12-13	8.4	13	6	10	12	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	54	14.8	+4.9	38	8†	-23	18	1.36	+0.86	0.52	15	16.8	7	17	2	9	nw.	Helge Dyste.
Fullerton	Dickey	1,439	48	14.2	+1.8	43	8	-20	17†	1.85	+1.14	0.48	14-15	17.2	7	10	9	9	nw.	F. O. Alin.
Gackle	Logan	1,951	15	.....	.....	45	8	.....	.....	0.25	.....	0.21	12	3.8	2	7	16	5	nw.	Jack Dixon.
Grafton	Walsh	827	54	14.8	+7.5	42	8	-17	16	0.23	-0.34	0.20	12-13	3.5	2	17	7	4	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	55	13.2	+5.5	40	24	-15	17	0.53	-0.03	0.27	12-13	5.9	9	11	14	3	nw.	University of N. Dak.
Grand Forks Apt. 2 1/2 mi. W	Grand Forks	832	5	12.2	.....	41	8	-18	17	0.71	.....	0.42	3-4	6.5	6	6	10	12	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	14.2	+0.1	45	8	-20	19	1.27	+0.73	0.67	15	15.0	8	14	1	13	se.	Soo Line Agent.
Hannah	Cavalier	1,568	52	9.4	+6.8	39	8	-21	17†	0.34	-0.25	0.20	6	4.8	2	5	7	16	nw.	A. E. Prior.
Hillsboro	Trails	901	40	15.3	+5.1	41	8†	-16	17†	0.42	-0.13	0.27	12	7.3	5	5	12	11	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	54	15.2	+5.3	44	8	-18	18	0.37	-0.22	0.28	12	5.1	3	10	7	11	w.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	5	13.2	.....	44	8	-21	18	0.54	.....	0.32	12	6.3	9	10	8	10	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	13.8	.....	45	8	-22	18	0.51	.....	0.48	12	6.5	2	13	7	8	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavalier	1,615	50	10.2	+5.4	40	8	-22	17	0.21	-0.42	0.12	12-13	2.0	5	9	13	6	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	53	12.0	+4.3	45	8	-14	16	0.29	-0.26	0.24	13	2.9	2	12	7	9	....	Chas. Ouradnik.
Lisbon	Ransom	1,091	42	15.2	+3.6	40	8	-24	18	1.13	+0.54	0.39	12	15.2	5	12	3	13	nw.	J. O. Halverson.
Mayville	Trails	975	50	16.1	+6.3	44	8	-15	17	0.31	-0.13	0.21	12	4.6	6	7	17	4	nw.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	23	10.7	+5.3	41	8	-25	18	0.45	0.00	0.43	12-13	5.3	3	15	4	9	nw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	34	15.4	+2.4	42	8	-25	18	0.89	+0.33	0.31	3-4	8.9	3	12	7	9	nw.	J. G. Carlson.
McVille	Nelson	1,467	4	.....	.....	45	8	.....	.....	0.25	.....	0.21	12	3.8	2	7	16	5	nw.	A. M. Casad.
Milnor	Sargent	1,117	13	11.6	.....	40	8	-27	18	1.58	+1.05	0.75	14-15	24.5	5	17	9	2	nw.	E. W. Wilson.
Oakes	Dickey	1,318	17	14.3	+1.4	43	8	-27	18	1.31	+0.85	0.41	14-15	15.4	7	14	5	9	nw.	F. H. Murray.
Park River	Walsh	998	42	11.3	+3.6	41	8	-20	17	0.14	-0.28	0.14	12	2.1	1	16	4	8	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	72	10.1	+7.3	40	8	-17	17†	0.14	-0.48	0.05	12-13	1.4	8	5	17	6	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	15	.....	.....	45	8	.....	.....	0.22	-0.26	0.22	12-13	2.7	2	10	9	9	nw.	T. M. Rykken.
Sharon	Steele	1,516	22	12.0	+2.5	42	8	-19	17†	0.22	-0.26	0.22	12-13	2.7	2	10	9	9	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,229	41	15.0	+3.5	40	8†	-22	18	0.70	+0.24	0.28	12	9.3	10	14	6	8	nw.	I. C. Robertson.
Wahpeton	Richland	962	54	15.0	+2.6	42	8	-29	18	0.95	+0.48	0.35	14-15	18.0	7	9	11	8	se.	W. J. Cavanaugh.
Average for Eastern Division				13.2	+4.2	45	8	-27	18	0.62	+0.08	0.75	15	7.5	5	12	8	8	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	50	11.6	+0.2	41	8	-29	18	0.76	+0.31	0.26	14-15	5.4	10	5	14	9	nw.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	43	11.5	+5.0	42	8	-17	17†	0.09	-0.27	0.09	12	1.4	1	12	10	6	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	71	17.6	+6.0	49	8	-10	7†	0.26	-0.13	0.22	6	3.7	3	10	6	12	nw.	U. S. Weather Bureau.
Bismarck Airport, 2 1/2 mi. SE.	Burleigh	1,650	6	16.7	+8.2	46	8	-17	7	0.21	-0.23	0.15	6	4.2	3	10	6	12	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	54	12.3	+7.4	49	5†	-26	17	0.12	-0.24	0.12	12-13	1.2	1	15	3	10	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	21	15.6	+2.5	42	8	-18	18	0.15	-0.38	0.15	6	1.5	1	9	7	12	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	34	18.4	+3.9	45	11	-12	17	0.39	-0.09	0.35	6	4.4	2	9	12	7	nw.	J. W. Evens.
Center	Oliver	2,100	8	16.9	.....	45	27	-20	17	0.34	.....	0.32	5	4.8	2	11	14	3	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	12.9	+2.5	42	8	-18	17†	0.07	-0.40	0.05	5	1.1	2	15	11	2	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rollette	1,682	50	.....	.....	45	8	.....	.....	0.16	.....	0.14	12	3.3	2	9	13	6	....	Hubert Downs.
Eckman	Bottineau	1,500	40	14.7	+7.2	47	27	-19	18	0.10	-0.27	0.05	3†	1.5	2	11	10	7	nw.	E. R. Sherman.
Fessenden	Wells	1,610	34	14.8	+5.1	44	8	-15	17†	0.02	-0.50	0.02	2	0.3	1	13	9	6	sw.	John V. Zuber.
Fort Yates	Sioux	1,670	46	18.0	+5.4	51	8	-23	17	0.27	-0.19	0.15	21	4.0	2	14	8	6	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,657	25	13.8	+1.8	45	8	-18	16†	0.20	-0.27	0.10	27	2.0	3	16	5	7	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	69	16.8	+5.7	46	8	-14	18	0.34	-0.17	0.28	6	3.9	4	14	5	9	w.	Mae H. Vorachek.
Granville	McHenry	1,504	39	16.6	+6.6	47	8	-14	17†	0.05	-0.38	0.03	13	1.1	2	19	4	5	nw.	Fred Roble.
Hansboro	Towner	1,597	38	9.8	+3.7	39	8	-17	17†	0.08	-0.42	0.04	12†	1.2	2	10	7	11	nw.	W. E. Disher.
Harvey	Wells	1,596	43	.....	.....	45	8	.....	.....	0.16	.....	0.14	12	3.3	2	9	13	6	....	Orville Holsch.
Leeds	Benson	1,515	5	14.4	.....	42	8	-17	17	0.16	.....	0.14	12	3.3	2	9	13	6	w.	John Dalmage.
Linton	Emmons	1,711	29	16.6	+2.8	50	8	-25	17	0.63	+0.21	0.23	6	6.7	9	11	7	10	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	31	13.1	+2.9	40	8	-20	17†	0.15	-0.25	0.07	12	2.1	3	8	15	5	nw.	A. T. Felland.
Mandan, 1 1/2 miles SW	Morton	1,750	32	15.0	+2.4	45	8	-17	1	0.25	-0.14	0.12	7	3.3	3	14	1	13	sw.	

Climatological Data for February 1945-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Epping	Williams	2,224	37	16.4	+7.0	45	8†	-19	17	0.20	-0.20	0.14	3	3.0	3	17	1	10	sw.	T. Beachler.
Fairfield, 9½ miles N	Billings	2,650	17							0.31	-0.11	0.18	12	3.5	2	16	2	10	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	28	20.0		50	8	-11	16	0.16	-0.29	0.12	6	1.9	3	8	10	10	uw.	Verne King.
Golva, 1 mile E	Golden Valley	2,781	5	19.6	+3.6	48	8	-16	17	0.18	-0.22	0.08	22	3.8	4	9	8	11	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	16.8	+7.8	44	8†	-22	17	0.16	-0.40	0.06	3	2.5	4	17	5	6	nw.	L. D. Nielson.
Halliday	Dunn	2,073	4							0.13		0.13	5-6	4.0	1	7	15	6	nw.	John Kisse.
Hettinger	Adams	2,675	39																	A. W. Anderson.
Kenmare	Ward	1,799	14	13.9	+5.7	46	27	-17	1†	0.22	-0.17	0.11	3	3.1	5	17	3	8	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	20.4	+3.2	47	8	-16	17	0.29	-0.12	0.14	12	3.2	4	13	6	9	nw.	S. P. Grane.
Medora	Billings	2,271	31	22.2		52	8	-9	17	0.04	-0.35	0.04	6	0.6	1	18	5	5	sw.	Harry Roberts.
Mott	Hettinger	2,424	39	19.8	+5.7	48	27	-12	7	0.09	-0.39	0.09	6	1.5	1	7	12	9	nw.	P. G. Wick.
New England	Hettinger	2,621	54	20.2	+5.7	47	8	-11	7†	0.49	0.00	0.32	6	8.0	4	7	12	9	nw.	F. S. Sleight.
New Hradec, 1 mile E	Dunn		4	17.4		46	27	-16	17†	0.19	0.17	6	1.9	3	11	8	9	w.	Peter F. Picek.	
Parshall	Mountrail	1,929	31	17.7	+9.0	46	8	-17	18	0.03	-0.36	0.02	6	0.6	2	14	10	4	uw.	C. E. Shubert.
Portal	Burke	1,954	32	11.6	+5.4	43	8†	-22	17	0.34	-0.04	0.20	3	4.9	4	12	8	8	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	14.0	+2.2	44	27	-23	17†	0.18	-0.27	0.08	3†	2.1	3	13	4	11	sw.	E. J. Lewis.
Richardton, 1½ miles N	Stark	2,467	30	18.4	+3.7	42	8†	-12	16	0.52	+0.11	0.40	6	4.7	4	11	8	9	nw.	Assumption Abbey.
Ryder	Ward	2,108	17							0.20	-0.28	0.11	6	2.7	4	14	4	10	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	14.5	+5.9	50	27	-25	1	0.22	-0.23	0.12	6	3.0	3	5	17	6	.....	H. J. Bugge.
Stanley	Mountrail	2,258	8	12.2		44	27	-23	17	0.10		0.10	5-6	3.0	1	17	10	1	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	17							0.13	-0.29	0.05	2-3	1.7	5	15	8	5	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	17							0.36	-0.01	0.22	2-3	6.0	2	7	12	9	w.	Morris J. Pederson.
Trotters	Golden Valley		20							0.29	-0.09	0.08	6	2.4	5	6	19	3	uw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	17.4		50	27	-16	17†	0.22		0.22	6	3.8	1	12	11	5	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	19.2	+5.5	48	8	-15	17	0.22	-0.21	0.18	6	3.5	2	12	13	3	nw.	J. C. Zeller.
Wildrose	Williams	2,258	16							0.11	-0.35	0.11	3	1.4	1	20	1	7	nw.	Jonathan Winkjer.
Williston	Williams	1,878	67	18.4	+10.3	47	8	-15	18	0.41	0.00	0.33	6	3.7	4	7	10	11	nw.	U. S. Weather Bureau.
Average for Western Division				17.4	+5.2	52	8	-25	1	0.23	-0.19	0.43	2	3.2	8	13	8	7	nw.	
Average for the State				15.1	+5.2	52	8	-29	18	0.36	-0.10	0.75	14-15	4.6	4	12	8	8	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
‡ And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for February 1945

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum	12	18	25	18	31	27	11	41	35	31	33	37	30	31	24	0	4	5	19	23	29	21	27	31	6	15	27	31			22.9
	Minimum	4	10	15	-2	9	1	-3	10	24	8	5	15	9	8	-6	-20	-26	-29	-10	8	11	-5	8	5	-10	-8	5	5			0.2
Bismarck Airport	Maximum	13	20	28	21	37	19	20	46	36	32	42	41	32	32	26	6	10	10	22	27	35	33	39	32	9	30	36	32			27.4
	Minimum	-6	11	17	11	9	-4	-17	20	27	16	14	24	20	18	-2	-7	-9	-11	-6	11	0	4	19	4	-5	-1	0	3	24		6.0
Bottineau	Maximum	11	16	20	24	49	27	24	49	46	22	29	29	28	34	17	6	13	19	28	38	34	32	40	23	12	26	40	31			27.4
	Minimum	-7	-1	0	2	4	-3	-8	-9	20	0	0	10	12	12	-14	-18	-26	-22	-6	5	2	-5	-3	12	-17	-13	-8	12			-2.8
Carson	Maximum	12	19	26	23	44	33	19	43	38	32	45	39	37	33	28	6	19	17	24	30	34	35	41	32	12	32	44	33			29.6
	Minimum	-5	8	16	9	11	-1	-10	15	28	14	17	25	22	21	1	-10	-12	-11	0	3	10	8	12	9	-9	-4	13	24			7.2
Crosby	Maximum	11	21	22	17	37	18	17	43	35	32	39	36	29	26	22	9	3	16	23	35	26	38	34	4	30	42	34				26.3
	Minimum	-9	2	15	-4	5	-2	-15	16	17	4	13	18	15	-2	-13	-17	-14	-20	-5	-2	15	5	13	-1	-18	-14	10	14			0.6
Devils Lake	Maximum	14	16	21	15	34	10	13	42	36	20	23	26	25	23	18	-2	0	10	22	30	32	25	36	31	4	24	37	27			21.9
	Minimum	3	-2	15	1	10	-6	-7	10	13	6	0	12	17	18	-8	-12	-17	-16	-6	1	10	2	13	2	-5	-6	5	19			2.6
Dickinson Airport	Maximum	12	20	25	24	43	24	35	42	35	32	40	36	33	35	21	5	15	13	22	33	32	35	37	26	8	29	44	32			28.1
	Minimum	-5	10	11	5	14	-2	-8	31	20	16	18	26	16	21	-9	-11	-12	-9	1	15	16	20	-3	-9	-5	9	22			7.2	
Dunn Center	Maximum	10	20	24	19	40	34	19	45	41	31	39	35	31	32	29	4	11	15	29	32	34	36	39	36	9	28	43	39			28.7
	Minimum	-10	7	16	8	9	0	-13	18	27	13	16	23	21	20	0	-11	-16	-15	-2	0	14	11	15	7	-10	-5	4	19			5.9
Fargo Airport	Maximum	14	20	25	23	29	23	12	38	36	22	21	33	32	32	28	1	4	8	17	28	30	23	35	37	15	27	30	29			24.0
	Minimum	1	8	16	-1	4	0	-10	3	21	9	1	11	21	32	19	4	2	11	23	27	33	27	38	32	16	24	37	30			3.2
Fessenden	Maximum	13	17	25	25	36	31	11	44	40	29	35	28	31	27	19	4	2	11	23	27	33	27	38	32	16	24	37	30			25.5
	Minimum	2	1	14	5	11	0	-10	4	27	8	5	15	16	7	-4	-11	-15	-15	-5	2	10	-1	15	11	9	-6	7	25			4.0
Fullerton	Maximum	17	20	28	23	28	20	12	43	37	31	30	36	31	34	29	5	4	6	25	19	30	28	35	34	18	20	36	36			25.5
	Minimum	-1	10	15	10	3	12	-3	3	24	15	9	15	24	13	5	-14	-20	-22	-4	5	-2	5	12	-4	-5	-7	8			3.0	
Garrison	Maximum	12	18	25	20	40	15	21	46	35	31	41	41	30	34	21	4	8	16	26	33	33	37	40	27	7	31	45	29			27.4
	Minimum	0	7	17	10	8	1	-5	21	20	13	14	22	20	11	-7	-9	-12	-14	-1	2	13	8	18	0	-9	-3	10	22			6.3
Golva	Maximum	15	24	24	26	44	33	39	48	37	35	41	38	40	35	20	9	19	18	26	37	38	41	26	13	35	45	35				31.4
	Minimum	0	12	7	3	14	-5	-8	36	23	15	24	26	16	18	-6	-11	-16	-8	1	2	16	22	20	-2	-6	4	8	21			7.8
Grafton	Maximum	12	16	22	23	22	13	42	40	36	30	29	29	29	29	27	5	4	13	18	28	35	30	38	39	26	28	38	36			26.1
	Minimum	-12	11	8	17	3	0	-10	9	23	1	-5	-5	21	12	4	-17	-15	-14	-8	-1	7	11	15	23	-3	-6	9	22			3.6
Grand Forks Airport	Maximum	14	20	22	20	27	19	10	41	36	18	18	32	30	28	-2	-2	11	18	27	33	25	36	37	10	28	34	30				23.1
	Minimum	-6	7	15	-1	5	-9	-14	6	12	1	-4	6	21	7	-3	-15	-18	-16	-7	8	11	8	10	10	4	-6	9	20			1.4
Jamestown Airport	Maximum	12	17	24	20	33	16	14	44	36	25	32	33	32	27	21	0	5	11	20	27	33	26	35	34	7	21	33	31			23.9
	Minimum	6	5	14	-2	6	-3	-10	8	18	10	8	14	18	14	-6	-13	-16	-21	-11	-8	10	0	15	6	-5	-6	1	13			2.5
Kenmare	Maximum	12	20	25	25	40	4	40	45	34	34	40	37	29	34	1	1	5	19	27	39	32	38	40	20	7	31	46	29			26.9
	Minimum	-17	-2	7	0	4	-1	-10	-9	27	7	6	20	18	7	-9	-14	-17	-17	-10	3	10	8	11	18	-13	-12	-4	14			0.9
Langdon	Maximum	14	10	18	18	22	16	10	40	35	23	19	25	23	26	19	1	5	9	18	26	33	29	35	28	10	26	33	32			21.5
	Minimum	0	-7	9	4	3	-10	-15	1	23	-2	-9	6	17	13	-4	-17	-22	-19	-8	-3	5	-3	6	10	-11	-12	5	18			-1.1
Marmarth	Maximum	15	25	25	25	38	32	34	47	37	36	41	39	40	34	30	14	13	15	25	35	38	41	42	25	10	35	42	42			31.2
	Minimum	0	12	15	14	11	12	0	27	28	15	24	23	16	24	2	-10	-16	-9	5	-1	10	16	16	10	-4	5	8	25			9.6
Minot Airport	Maximum	10	17	22	16	37	10	19	44	35	29	38	38	27	32	14	-1	2	15	22	33	31	36	38	25	5	27	40	31			24.7
	Minimum	-5	4	12	9	10	-4	4	19	16	9	15	19	17	3	-11	-13	-14	-15	-2	7	10	8	19	-4	-10	-3	15	20			4.7
Mott	Maximum	14	21	22	23	44	36	28	41	39	34	42	40	40	36	31	9	17	17	21	34	30	40	43	37	11	35	48	41			31.7
	Minimum	-3	10	16	9	10	-4	12	25	29	15	18	27	17	23	2	-9	-11	-8	3	-2	9	12	13	10	-7	-4	12	25			8.3
Pembina Airport	Maximum	17	18	20	17	19	11	12	40	36	10	17	26	31	30	15	-5	3	11	17	26	28	23	37	38	4	22	36	25			20.6
	Minimum	-1	-7	11	-1	5	-12	-16	4	9	-2	-8	5	19	12	-6	-15	-17	-17	-9	-2	5	7	14	4	-9	-10	6	19			-0.4
Sharon	Maximum	15	16	15	10	33	22	12	42	36	26	19	26	30	28	24	-2	1	10	18	22	26	27	35	37	15	25	34	31			22.2
	Minimum	5	-3	-3	-5	-5	-2	-10	5	26	6	-1	8	16	13	-2	-14	-19	-19	-8	-3	10	3	11	15	-6	-8	7	22			1.4
Steele	Maximum																															
	Minimum																															
Valley City	Maximum	14	18	24	24	31	29	14	40	40	35	24	29	31	33	31	8	3	11	18	25	32	30	37	37	32	27	35	34			26.6
	Minimum	9	1	15	9	2	7	-8	4	30	11	5	13	15	12	8	-11	-17	-22	-11	-5	4	2	5	14	-2	-7	0	14			3.8
Wahpeton	Maximum	17	18	25	25	32	32	17	42	39	38	26	32	35	34	33	12	4	4	15	29	32	27	33	37	36	28	33	34			27.7
	Minimum	6	9	15	9	-5	15	-10	4	25	10	-1	13	24	16	7	-18	-28	-29	-16	5	23	8	4	13	1	-14	-3	-3			2.2
Williston	Maximum	15	24	24	23	40	13	30	47	37	35	44	35	36	33	10	5	8	19	26	38	37	40	40	27	9	34	47	32			28.9
	Minimum	2	11	9	5	12	-2	-8	30	22	17	21	26	23	10	-8	-11	-15	-15	-1	8	18	21	23	-2	-9	-6	10	20			7.0

Daily Precipitation for February 1944

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James	T.	T.											.13		T.																	0.13
Casselton	Red.	T.	T.	.08			T.						.30							T.		.25											0.63
Cooperstown	Sheyenne	T.	T.	T.			T.						.28							T.													0.28
Courtenay	James	T.	T.	T.			T.						.33																				0.33
Devils Lake ^{1 5}	Devils Lake	T.	T.	.02	T.	T.	T.	T.	.02	T.			.21	T.	T.					T.													0.35
Edgeley	James	T.	T.	.11			.03						.31			.11				.08		.11				T.	.02	T.					0.75
Edmore	Devils Lake												.06																				0.06
Ellendale	James	.05	.19				.37			.02			.40		.21	.31				.17		.17											1.89
Fargo ^{1 5}	Red.	T.	.01	.05	.01		.01	T.	.04		.01		.28	.02	T.	.11	T.			.04		.26	T.		.01	T.	.02						0.87
Forman	Sheyenne	T.	T.	.20			.05			.09			.25		T.	.52				.13		.12											1.36
Fullerton	James	T.		.18			.38	T.		.02			.38	T.	T.	.48				.12		.29											1.85
Gackle	do																																
Grafton	Red.			T.	.03								T.	.20						T.													0.23
Grand Forks Airport ³	do	T.	T.	.02	.40			T.	.12	T.	T.		.12	.02		T.	.05			.03	T.		T.		T.	T.	T.						0.70
Hankinson ²	do				.14				.15				.19			.67						.04	.01										1.27
Hannah	Pembina			.14		T.	.20																				T.	.02					0.34
Hillsboro	Red.	T.	T.	.04	T.				T.				.27	.03						T.		.05											0.42
Jamestown Airport ³	James	.01	T.	.01	.01		.04				T.		.32	T.						.03		.08						T.	.03				0.54
Langdon	Pembina			.07			.01						.02	.10	T.					T.									.01				0.21
Larimore	Red.				.05								.24																				0.29
Lisbon	Sheyenne		T.	.16			.07						.39			.24						.27											1.13
Mayville	Red.	T.	T.	.02	.01		T.		.01				.21	.05						.01		T.											0.31
McHenry	James			T.			T.						.38	.05							.02												0.45
McLeod	Sheyenne	T.			.31					.29	.29									T.		T.						T.					0.89
Oakes ²	James	T.		.16			.11	T.		.02			.37	T.		.41				T.		.12		.12									1.31
Park River	Red.			T.									.14	T.						T.													0.14
Pembina Airport ³	do	T.		.01	T.	T.	T.		.02	T.	T.		.03	.02	.01	T.	T.			T.				T.	T.	.02	T.	.02		.01			0.14
Petersburg	do																																
Sharon	do	T.	T.								T.		T.																				
Valley City	Sheyenne	.01	.01	.02	T.		.04						.20	.02			.09			.04		.17				T.		.02					0.22
Wahpeton	Red.		.02	.19	T.		.02				T.		.25			.35				.07		.05											0.70
Middle Division																																	
Ashley ³	Missouri	.01	T.	.16	.01		.12	T.	T.	T	T		.13	T.	.16	.10				.03	.02	.02				T.	T.	T.					0.76
Bisbee	Devils Lake												.09																				0.09
Bismarck Airport ^{1 5}	Missouri	T.	T.	T.	T.	T	.15	T	T.			T	.01	T.	T.					.05					T.								0.21
Bottineau ²	Mouse													.12																			0.12
Butte	do				T.	T.	.15					T.	T.																				0.15
Carson	Heart						.35													T.		.04											0.39
Center	Missouri	T	T.			.32	T.												.02		T.												0.34
Drake ²	Mouse			T	T.		.05							.02						T.													0.07
Dunseith	do																																
Eckman	do			.05				T.					.05																				0.10
Fessenden	James		.02									T																					0.02
Fort Yates	Missouri													.07		T	.12																0.27
Foxholm	Mouse			.03		T		T					.03	.02																			0.20
Garrison ³	Missouri	.01	T.		T		.28						.03	.02																			0.34
Granville	Mouse			T	T		.02						T.	.03																			0.05
Hansboro	Devils Lake												.04	.04																			0.08
Linton	Missouri	.02		T	T		.23	.01					.02	.04	.03	.15				.07		.06											0.63
Laddock	Sheyenne		T.	.05			.03						.07																				0.15
Mandan ²	Missouri						.11	.12												.02													0.25
Max ²	do	T		T	T		T.	.08		T.			T.	.10																			0.18
McClusky	do						.08						T.	.05																			0.13
Minot Airport ³	Mouse	T.	T.	.04	T	T.	.01	T	T			T.	.04	.08						T.													0.17
Mohall	do			.16	.01		T.						.09			.05																	0.26
Napoleon ²	Missouri	.05			T		.05	T.		T.			T.	T.		.05				.08		.10											0.28
New Salem	Heart.		T.				.10	.01					T.								.04		.01										0.16
Pettibone	James						.02						.10	.06	.09					T.													0.27
Rolla	Devils Lake	T.		.12	T	T.	T			T.			.19	.02																			0.33
Rugby	Mouse												T.																				0.07
Selfridge	Missouri			T			.24			T.						.12	.16																0.77
Steele	do																																
Towner	Mouse												.10	T.																			0.10
Turtle Lake	Missouri		T.		T		.15																										0.15
Tuttle	do		.01	.01			.12	.01					.08								.09												0.32
Underwood	do						.16	.09					T.																				0.25
Velva	Mouse			.05	T		.04						T.	.07																			0.16
Washburn	Missouri				T.		.16						T.	.02						T.													0.18
Westhope	Mouse			.23			T.						.08																				0.31
Willow City	do									T			.06																				0.09
Wishek ²	Missouri		T.		.01		.01	.09						.08		.10				.02		.10											0.41
Western Division																																	
Alpha	Lit. Missouri	T.	T.				.05						.06		.04								.02			T							0.17
Amidon	do						.10																										0.10
Bowman ²	Grand	T.	T.				.11					T.			.02																		0.13
Crosby ²	Mouse	T.			.19																												

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

2 Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

551.05
UNNT
1.54³

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIV BISMARCK, N. D., MARCH 1945 No. 3

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

March 1945 was the third warmest March in the climatological history of the state. Temperatures were unusually mild from 10th to the 25th and nearly all stations had above normal readings on all days from the 10th to the 31st. The precipitation was above normal with most of it occurring from the 23d to the 28th. Precipitation also occurred on the 4th, 15th, and 16th. The western section averaged more moisture than the eastern section. It was the wettest March since 1916 in the western part of the state. The weather was excellent for outdoor work. Snow on the ground was gone at most stations before the 15th, but more fell at the close of the month. Plowing and seeding were getting a good start at most places during the third week, but the precipitation and colder weather later in the month brought this work to a standstill. Livestock were in good condition with feed shortage at only a few places. Floods occurred along the Knife, Heart, and Cannonball rivers in the western part of the state and along the Red and its tributaries in the eastern part of the state. The damage was considerably less than in 1943 and it occurred mostly in the vicinity of Mandan, Fargo, and Wahpeton.

TEMPERATURE

The mean temperature for the state was 33.3°, or 9.5° above the 1892-1945 average for March. The mean temperature for the eastern division was 34.1°; for the middle division, 33.1°; and for the western division, 32.7°. The highest mean temperature was 37.0° at Wahpeton, and the lowest, 29.7° at Crosby, making a range in mean temperature of 7.3°. The absolute range was 104°, from 77° at Linton on the 22d, to -27° at Bottineau and Stanley on the 5th. The average daily excess in temperature for the state since January 1, 1945, is 6.9°.

PRECIPITATION

The average precipitation for the state was 1.34 inches, or 0.54 inch more than the 1892-1945 average for March. In the eastern division the average amount was 1.12 inches; in the middle division, 1.43 inches; and in the western division, 1.48 inches. The greatest monthly amount reported was 3.20 inches at Bisbee; the least, 0.25 inch at Pettibone. The greatest amount recorded in any 24 consecutive hours was 2.42 inch at Bisbee on the 25-26th. The accumulated excess in precipitation for the state since January 1, 1945, is 0.38 inch. The average snowfall was 2.4 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	6	4	4	1	1	9	18	2	8	1	1	1	7	15	3	3	11	10	1	2	4	11	4	19	3	1	1	1	1	1	1
Lunar halos ..	1	1	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos ..	1	1	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thundrstm. ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.44	5	29.15	23	10.1	38	e.	23	86	88	69	70	53	959
Devils Lake ..	30.40	5	29.25	26	8.7	26	nw.	1	81	82	69	72	48	992
Fargo	30.34	5	29.25	26	12.2	33	n.	4	90	93	70	76	67	923
Williston	30.49	4	29.36	15	7.8	26	w.	13	77	84	62	51	62	986

† And other dates.

COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	24.2	66	-35	0.87	0.98	0.65	0.83	1.9	4	12	8	11	
1893...	13.9	68	-35	1.10	1.30	0.46	0.95	10.0	5	13	7	11	
1894...	24.8	69	-22	1.20	1.71	1.43	1.45	10.1	5	12	9	10	
1895...	23.2	75	-35	0.07	0.21	0.24	0.17	1.0	2	16	10	5	
1896...	15.7	70	-35	1.19	1.15	1.06	1.13	8.0	8	12	10	9	
1897...	11.9	58	-48	1.15	1.04	1.90	1.36	8.0	7	15	7	9	
1898...	21.3	79	-24	0.77	0.80	0.80	0.79	6.7	5	13	8	10	
1899...	7.5	72	-30	1.23	0.96	0.68	0.96	10.0	5	12	10	9	
1900...	20.3	77	-24	0.96	0.96	1.11	1.01	8.5	5	14	7	10	
1901...	25.3	85	-32	0.95	0.85	0.78	0.86	5.2	5	15	8	8	
1902...	27.4	65	-25	2.75	2.90	2.55	2.73	11.7	8	10	6	15	
1903...	22.1	80	-24	0.78	0.44	0.42	0.55	5.1	3	12	6	13	
1904...	18.2	64	-26	1.26	1.33	1.64	1.41	11.5	5	11	6	14	
1905...	32.5	81	-25	1.09	0.85	0.32	0.75	2.3	4	11	8	12	
1906...	18.5	67	-34	0.31	0.39	0.44	0.38	3.1	3	15	6	10	
1907...	23.1	83	-20	0.57	0.58	1.00	0.72	5.1	4	14	9	8	
1908...	21.1	68	-31	1.17	0.94	1.53	1.21	12.1	8	10	9	12	
1909...	24.0	61	-24	0.34	0.40	0.26	0.33	2.7	4	10	9	12	
1910...	41.3	90	-7	0.83	0.93	1.08	0.94	0.3	3	18	8	5	
1911...	30.6	78	-18	0.14	0.26	0.29	0.23	1.6	2	16	10	5	
1912...	15.4	65	-28	0.28	0.32	0.52	0.37	3.6	3	17	8	6	
1913...	17.2	70	-31	0.82	0.73	1.00	0.85	8.2	6	12	9	10	
1914...	25.5	76	-20	0.83	1.06	0.75	0.88	9.2	5	10	9	12	
1915...	22.9	63	-23	0.38	0.20	0.07	0.22	2.0	2	16	6	9	
1916...	20.3	69	-45	1.43	1.82	1.00	1.42	13.5	6	11	9	11	
1917...	22.2	67	-89	0.44	0.33	0.37	0.38	3.9	3	13	10	8	
1918...	35.0	82	-15	0.32	0.46	0.42	0.40	2.9	2	16	8	7	
1919...	17.8	67	-35	0.63	0.93	0.78	0.78	6.2	4	12	9	10	
1920...	22.4	67	-32	0.46	0.83	1.20	0.83	7.1	4	15	8	8	
1921...	25.2	75	-22	1.07	1.02	0.81	0.97	9.1	6	9	12	10	
1922...	25.8	60	-30	0.96	0.67	0.50	0.71	6.4	4	12	7	12	
1923...	18.3	65	-35	0.34	0.44	0.35	0.38	4.8	4	10	10	11	
1924...	25.5	58	-32	0.32	0.36	0.75	0.48	4.4	4	10	9	12	
1925...	27.4	75	-26	0.74	0.56	0.75	0.68	6.0	4	14	9	8	
1926...	25.8	83	-23	0.35	0.19	0.17	0.24	1.8	3	13	10	8	
1927...	30.4	77	-10	0.90	0.78	0.47	0.72	6.5	5	13	8	10	
1928...	28.1	85	-17	0.69	0.55	0.31	0.52	4.8	3	15	8	5	
1929...	30.5	77	-15	0.68	0.65	1.02	0.78	5.3	5	12	8	11	
1930...	26.1	62	-17	0.17	0.05	0.05	0.09	0.9	1	17	8	6	
1931...	25.7	63	-24	0.99	0.85	0.99	0.94	4.8	5	11	8	12	
1932...	18.9	64	-30	0.52	0.60	0.80	0.64	6.0	6	10	11	10	
1933...	28.5	70	-14	0.46	0.41	0.49	0.45	3.7	3	14	10	7	
1934...	26.3	74	-12	0.43	0.34	0.71	0.49	3.6	4	11	11	9	
1935...	26.3	75	-37	2.00	0.89	0.90	1.26	7.0	5	9	11	11	
1936...	25.4	61	-27	0.73	0.75	0.94	0.81	8.1	6	10	11	10	
1937...	24.8	72	-20	0.42	0.34	0.42	0.39	4.3	3	12	11	8	
1938...	33.1	72	-14	0.63	0.57	0.58	0.59	2.5	4	13	10	8	
1939...	23.3	81	-29	0.33	0.41	0.42	0.39	5.3	3	16	8	7	
1940...	23.1	64	-26	1.19	0.71	0.72	0.87	9.1	7	9	9	13	
1941...	24.5	68	-25	0.65	0.64	0.46	0.58	6.8	5	11	8	12	
1942...	30.0	66	-8	2.77	1.72	1.01	1.83	12.8	9	9	8	14	
1943...	17.0	77	-30	1.08	1.37	1.23	1.23	14.8	7	11	11	9	
1944...	16.7	53	-25	1.08	0.68	0.66	0.81	10.2	8	7	9	15	
1945...	33.3	77	-27	1.12	1.43	1.48	1.34	2.4	6	13	9	9	
Period	23.8	90	-48	0.83	0.79	0.77	0.80	6.2	5	12	9	10	

NAT.
HIST.

Climatological Data for March 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Carrington	Foster	1,579	48	31.8	+8.1	72	21	-18	6	0.90	+0.21	0.35	26	2.4	6	22	5	4	nw.	Soo Line Agent.	
Casselton	Cass	934	50	35.5	+10.8	76	24	-11	6	1.34	+0.58	0.45	25	0.5	6	16	8	7	s.	C. Hayford.	
Cavalier	Pembina	894	38	32.8		71	21	-12	5	1.51	+0.75	0.95	25-26	T	3	11	10	10	s.	City Light & Power Co.	
Colgate	Steele	1,180	12							1.06	+0.26	0.72	24	3.5	4	17	11	3	sw.	O. M. Jensen.	
Cooperstown	Griggs	1,428	49	35.2	+10.9	74	24	-18	6	1.04	+0.33	0.48	26	1.5	5	10	9	12	nw.	R. J. Lockner.	
Courtenay	Stutsman	1,523	15							1.05	+0.21	0.38	23	1.3	5	15	7	9	w.	G. H. Hanawalt.	
Devils Lake	Ramsey	1,478	70	33.1	+13.3	71	21	-15	5	1.70	+0.92	1.22	25-26	4.7	6	8	11	12	sw.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	45	35.1	+7.8	74	22	-16	6	0.61	-0.22	0.36	25	1.4	5	12	8	11	s.	N. Dak. Agri. Exp. Sta.	
Edmore, 1 1/2 miles W.	Ramsey	1,524	22	30.8	+9.7	67	21	-20	6	1.44	+0.75	0.79	26	0.6	5	17	6	8	nw.	Mike Davis.	
Ellendale	Dickey	1,457	47	34.8	+7.6	75	22	-16	6	1.44	+0.49	0.84	25-26	1.1	6	14	6	11	nw.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	65	35.0	+12.3	72	22	-15	6	1.20	+0.19	0.43	25-26	1.0	8	9	9	13	s.	U. S. Weather Bureau.	
Forman	Sargent	1,249	54	35.5	+9.5	73	22	-18	6	1.21	+0.41	0.87	16	0.8	5	19	5	7	s.	Helge Dyste.	
Fullerton	Dickey	1,439	48	35.2	+8.1	73	22	-17	6	0.99	-0.07	0.23	4	2.4	7	11	11	9	s.	F. O. Alin.	
Gackle	Logan	1,951	15																	Jack Dixon.	
Grafton	Walsh	827	54	35.6	+13.9	68	22	-9	5	0.92	+0.22	0.70	25-26	0.1	6	13	7	11	se.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	55	34.4	+11.9	69	22	-10	6	1.16	+0.38	0.50	25	1.7	8	12	15	4	s.	University of N. Dak.	
Grand Forks Airt. 2 1/2 mi. W	Grand Forks	832	5	33.7		69	24	-10	6	1.03		0.74	25-26	2.3	6	5	10	16	s.	U. S. Airway Comm. Sta.	
Hankinson	Richland	1,068	17	34.4	+5.8	76	22	-16	6	0.92	+0.10	0.37	17	0.4	6	15	6	10	sw.	Soo Line Agent.	
Hannah	Cavalier	1,568	52	30.0	+10.8	65	21	-20	5	1.31	+0.59	0.55	25	2.7	5	4	9	18	sw.	A. E. Prior.	
Hillsboro	Traill	901	40	35.6	+10.3	71	23	-10	6	1.04	+0.28	0.63	25-26	2.3	8	11	7	13	s.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	54	35.4	+11.0	73	22	-17	6	0.54	-0.36	0.17	25	2.4	6				s.	N. Dak. State Hospital.	
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	5	34.0		74	22	-17	6	0.77		0.34	31	2.8	6	9	12	10	nw.	U. S. Airway Comm. Sta.	
Kensal, 7 miles SW	Stutsman	1,440	5	33.0		70	21	-19	6	0.88		0.22	25	2.5	7	17	5	9	sw.	U. S. Wildlife Refuge.	
Langdon, 1 mile E	Cavalier	1,615	50	31.7	+11.9	67	21	-20	5	1.85	+1.07	0.98	25-26	3.6	7	9	10	12	sw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	53	33.2	+10.5	71	22	-13	6	1.07	+0.26	0.38	25	1.0	5	17	4	10		Chas. Ouradnik.	
Lisbon	Ransom	1,091	42	36.1	+8.8	74	22	-16	6	1.00	+0.27	0.36	16	0.5	7	14	3	14	sw.	J. O. Halverson.	
Mayville	Traill	975	50	36.0	+11.3	71	23	-11	6	0.88	+0.19	0.35	25	3.6	8	7	18	6	s.	H. A. Ragaz.	
McHenry, 3 miles NE.	Eddy	1,509	23	31.6	+8.6	70	24	-22	6	1.13	+0.44	0.40	25-26	2.8	6	13	8	10	sw.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	34	35.0	+7.2	72	22	-18	6	1.45	+0.67	0.88	16	0.2	5	18	5	8	sw.	J. G. Carlson.	
McVille	Nelson	1,467	4							1.26		0.75	25	1.2	6	8	16	7	nw.	A. M. Casad.	
Oakes	Dickey	1,318	17	35.8	+8.1	76	22	-19	6	1.03	+0.23	0.48	15-16	0.5	5	11	6	14	nw.	F. H. Murray.	
Park River	Walsh	995	42	32.7	+9.9	66	21	-15	5	1.01	+0.35	0.54	25	0.5	5	16	8	7	nw.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	803	72	32.0	+13.6	69	24	-14	5	1.46	+0.66	1.15	25-26	0.5	5	6	14	11	s.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	15	32.8		68	22	-16	6	0.68	-0.05	0.45	25	1.0	3	10	11	10	s.	T. C. Overland.	
Sharon	Steele	1,516	22	33.6	+9.4	70	22	-17	6	1.21	+0.59	0.60	25	4.5	8	10	12	9	sw.	Nels O. Greifheim.	
Valley City	Barnes	1,229	41	36.0	+9.7	74	24	-17	6	0.61	-0.08	0.38	25	1.5	6	17	6	8	sw.	I. C. Robertson.	
Wahpeton	Richland	962	54	37.0	+9.4	74	22	-18	6	1.61	+0.89	0.73	16	T	6	13	10	8	se.	W. J. Cavanaugh.	
Average for Eastern Division				34.1	+9.9	76	22	-18	6	1.12	+0.29	1.22	25-26	1.7	6	12	9	10	s.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,014	50	31.4	+6.5	73	22	-25	6	0.49	-0.34	0.26	25-26	1.3	6	8	15	8	nw.	U. S. Airway Comm. Sta.	
Bisbee	Towner	1,601	43	32.4	+9.9	70	21	-19	5	3.20	+2.49	2.42	25-26	1.0	4	15	6	10	nw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	71	34.5	+9.3	75	21	-17	6	0.60	-0.27	0.24	25	2.7	7	6	10	15	e.	U. S. Weather Bureau.	
Bismarck Airt. 2 1/2 mi. SE.	Burleigh	1,650	6	34.0	+12.1	74	21	-17	6	0.98	+0.09	0.44	25-26	2.5	7	6	10	15	e.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	54	31.4	+10.6	69	22	-27	5	2.15	+1.48	1.35	25-26	1.0	2	20	3	8	se.	N. D. School of Forestry	
Butte, 3 miles WSW.	McLean	1,880	21	33.4	+7.0	68	21	-18	6	1.66	+0.84	0.45	25	2.0	7	11	10	10	sw.	R. L. Williams.	
Carson, 2 1/2 miles SW	Grant	2,500	34	35.0	+8.0	74	21	-15	5	1.17	+0.31	0.62	25	1.5	9	15	7	9	nw.	J. W. Evans.	
Center	Oliver	2,100	8	32.2		72	21	-23	5	1.38		0.43	25	4.6	8	12	9	10	nw.	Fred L. Heinz.	
Drake	McHenry	1,634	16	31.7	+7.0	70	21	-24	5	1.25	+0.55	0.63	27	1.0	6	18	10	3	s.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	50																	Hubert Downs.	
Eckman	Bottineau	1,500	40	32.6	+9.6	71	21	-20	5	2.61	+2.05	1.11	25-26	6.5	5	7	14	10	sw.	E. R. Sherman.	
Fessenden	Wells	1,610	34	33.1	+9.4	72	21	-21	6	1.38	+0.63	0.98	26	2.0	6	16	8	7	s.	John V. Zuber.	
Fort Yates	Sioux	1,670	46	36.6	+9.4	75	22	-19	6	1.25	+0.44	0.75	24	2.0	5	21	1	9	se.	P. J. Jacobson.	
Foxholm, 6 1/2 miles NE.	Ward	1,657	25	32.2	+6.8	70	21	-20	5	1.43	+0.71	0.79	25-26	2.1	8	15	7	6	nw.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	69	33.4	+9.0	70	21	-18	5	1.93	+1.14	0.99	25-26	4.3	8	6	12	13	nw.	Mae H. Vorachek.	
Granville	McHenry	1,504	39	33.6	+9.1	72	21	-23	5	1.23	+0.69	0.60	26	2.5	3	18	7	6	w.	Fred Roble.	
Hansboro	Towner	1,597	38	31.2	+10.5	67	21	-19	6	2.34	+1.46	1.13	25-26	1.2	6	14	9	8	nw.	W. E. Disher.	
Harvey	Wells	1,596	43																	Orville Hoksich.	
Leeds	Benson	1,515	5	34.4		71	21	-17	5	2.97		1.20	26	0.5	4	10	17	4	w.	John Duhane.	
Linton	Emmons	1,711	29	35.6	+7.6	77	22	-20	6	0.48	-0.30	0.13	26	1.1	8	13	2	16	nw.	Wm. Heyerman.	
Maddock, 1 mile E	Benson	1,604	31	33.5	+9.2	72	21	-19	5	1.53	+0.89	0.81	25-26	1.8	5	8	13	10	nw.	A. T. Felland.	
Mandan, 1 1/2 miles SW	Morton	1,750	32	33.0	+6.2	76	21	-20	6	0.62	-0.22	0.31	25	2.5	5	16	1	14	se.	No. Gt. Plains Field Sta.	
Max	McLean	2,093	17	31.0	+6.5	68	21	-20	5	1.01	+0.27	0.36	27	3.5	5	19	2	10	.....	Soo Line Agent.
McClusky	Sheridan	1,943	28	33.4	+7.2	71	21	-19	5	1.14	+0.36	0.41	25	2.0	6	17					

Climatological Data for March 1945-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Fairfield, 94 miles N.	Billings	2,650	17							1.83	+1.11	0.65	25-26	1.8	6	16	7	8	sw.	Mrs. Edith Larson.	
Fryburg, 2 miles N.	Billings	2,790	28	33.9		69	22	-19	5	2.10	+1.29	0.96	25-26	2.5	7	7	12	12	sw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,781	5	32.2	+4.6	71	22	-26	5	1.36	+0.61	0.57	25-26	2.5	8	4	7	20	w.	U. S. Airway Comm. Sta.	
Gronora	Williams	2,114	37	33.0	+10.6	68	21	-23	5	1.38	+0.70	0.59	26-27	5.0	6	19	6	6	nw.	L. D. Nielson.	
Halliday	Dunn	2,073	4							1.30		0.39	25	4.0	5	16	7	8	nw.	John Kisse.	
Hettinger	Adams	2,675	39							1.56	+0.90	0.70	25-26	1.0	5	20	6	5	nw.	A. W. Anderson.	
Kenmare	Ward	1,799	14	32.0	+8.8	69	21	-21	5	1.52	+0.87	0.84	25-26	1.3	4	17	6	8	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	37	33.7	+4.9	72	22	-25	5	0.85	+0.12	0.36	26	3.0	5	17	5	9	nw.	S. P. Grane.	
Medora	Billings	2,271	31	35.8		71	22	-24	5	1.18	+0.42	0.66	25-26	0.5	4	19	5	7	sw.	Harry Roberts.	
Mott	Hettinger	2,424	39	35.2	+7.6	73	21	-16	5	1.76	+0.90	0.72	25-26	1.0	8	5	15	11	w.	P. G. Wick.	
New England	Hettinger	2,621	54	35.8	+9.7	73	21	-13	6	2.83	+2.02	0.93	30-31	8.5	6	17	5	9	se.	F. S. Sleight.	
New Hradec, 1 mile E.	Dunn		4	32.4		66	22	-20	5	1.07		0.44	24-25	1.3	5	18	3	10	sw.	Peter F. Fieck.	
Parshall	Mountrail	1,929	31	32.6	+7.3	69	21	-26	5	1.25	+0.67	0.43	25	1.5	7	7	17	7	sw.	C. E. Shubert.	
Portal	Burke	1,954	32	30.4	+12.0	69	21	-25	5	1.73	+1.12	1.07	25-26	6.0	5	13	9	9	sw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	41	31.2	+5.7	67	21	-26	5	1.00	+0.30	0.45	26	4.5	5	10	10	11	sw.	E. J. Lewis.	
Richardton, 14 miles N.	Stark	2,467	30	34.1	+6.9	69	21	-18	5	2.54	+1.82	0.82	23	3.0	5	10	7	14	w.	Assumption Abbey.	
Ryder	Ward	2,108	17							1.06	+0.52	0.35	26-27	2.0	6	10	7	14	se.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	20	30.6	+5.8	68	21	-23	6	0.75	+0.17	0.30	26	T	4	7	17	7	.....	H. J. Bugge.
Stanley	Mountrail	2,258	8	29.8		66	21	-27	5	1.47		0.52	25-26	6.5	6	15	11	5	w.	Leroy Edwards.	
Tagus	Mountrail	2,179	17							1.13	+0.51	0.75	25-26	2.2	10	11	14	6	w.	Geo. N. Pilgard.	
Tioga	Williams	2,279	17							1.60	+0.97	0.70	25-26	4.4	5	5	13	13	sw.	Morris J. Pederson.	
Trotters	Golden Valley		20							1.61	+0.84	0.60	26	5.0	6	4	19	8	nw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	5	33.4		70	21	-22	5	1.02		0.36	25-26	4.0	6	9	14	8	nw.	H. Glenn Sims.	
Watford City	McKenzie	2,084	33	33.8	+7.6	69	22	-25	5	1.90	+1.21	0.86	26	2.3	7	13	12	6	sw.	J. C. Zeller.	
Wildrose	Williams	2,258	16							0.84	+0.22	0.36	26	2.0	3	24	4	3	sw.	Jonathan Winkjer.	
Williston	Williams	1,878	67	33.2	+10.3	69	21	-22	5	1.40	+0.71	0.73	26	2.5	7	8	4	19	s.	U. S. Weather Bureau.	
Average for Western Division					32.7	+6.9	75	21	-27	5	1.48	+0.71	1.07	25-26	2.6	6	18	9	9	sw.	
Average for the State					33.3	+9.5	77	22	-27	5	1.34	+0.54	2.42	25-26	2.4	6	13	9	9	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for March 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum..	35	13	22	19	-2	6	22	31	37	39	37	42	45	38	41	37	48	44	50	58	67	73	61	69	60	46	41	55	60	61	63	42.5
	Minimum..	12	-10	-9	-3	-18	-25	-5	5	16	14	23	23	27	32	33	31	29	29	26	31	32	30	42	37	42	38	28	27	28	27	36	20.2
Bismarek Airport	Maximum..	38	16	25	22	3	17	30	40	42	46	47	60	53	41	52	45	54	41	55	66	74	74	63	65	57	44	35	54	56	60	47	45.9
	Minimum..	14	0	9	-4	-13	-17	-6	-2	24	27	30	28	30	35	32	30	25	28	24	29	32	31	41	37	41	35	29	29	28	29	34	22.2
Bottineau	Maximum..	34	23	26	7	8	18	31	38	40	48	51	57	54	42	49	48	46	47	57	67	68	69	60	62	58	48	36	44	53	55	50	45.0
	Minimum..	8	-11	-10	-2	-27	-20	-13	3	12	16	21	23	27	30	31	24	25	24	23	27	33	31	34	42	38	38	28	25	26	25	25	17.9
Carson	Maximum..	38	30	30	23	7	17	34	44	44	55	47	64	53	46	53	46	54	52	54	68	74	72	60	63	52	45	40	55	57	58	50	47.9
	Minimum..	16	-1	10	0	-15	-13	-1	9	25	28	27	29	33	29	31	31	21	27	22	29	34	31	38	35	38	37	25	22	29	29	33	22.2
Crosby	Maximum..	27	16	22	-5	5	15	36	38	43	45	46	53	50	43	44	48	49	47	53	66	68	65	64	58	55	37	33	47	51	50	47	42.5
	Minimum..	9	-14	-13	-8	-26	-25	-14	3	8	15	27	26	28	25	27	24	21	21	26	29	33	28	30	33	34	36	23	24	39	31	32	16.9
Devils Lake	Maximum..	35	10	25	21	4	13	26	33	37	40	45	52	53	45	42	46	48	39	49	63	71	65	63	67	51	48	33	44	48	55	52	42.7
	Minimum..	6	-5	6	4	-15	-11	-1	17	21	22	29	29	33	34	33	30	29	28	24	31	38	40	37	41	43	33	29	29	31	33	35	23.5
Dickinson Airport	Maximum..	32	21	28	22	5	15	30	38	43	44	51	47	43	42	49	45	50	39	50	64	69	69	62	54	43	41	32	51	50	53	44	42.7
	Minimum..	9	-2	10	-10	-18	-11	8	9	22	25	26	30	31	28	30	28	24	28	27	30	36	30	37	37	36	31	23	24	32	31	32	21.7
Dunn Center	Maximum..	33	29	27	25	2	15	34	40	43	46	44	55	50	48	51	47	50	47	52	63	68	67	65	56	53	42	35	51	53	53	51	45.0
	Minimum..	15	-5	2	-5	-24	-18	-6	0	19	23	25	26	29	28	31	25	21	25	24	25	28	27	35	40	37	34	24	25	28	26	28	19.1
Fargo Airport	Maximum..	35	21	20	20	7	15	26	30	40	40	46	51	56	47	43	40	54	52	49	58	64	72	71	70	60	56	45	51	59	60	56	45.6
	Minimum..	18	0	1	-2	-7	-15	0	1	15	23	30	29	35	34	33	33	32	31	27	32	35	37	39	48	48	43	31	31	30	31	37	24.5
Fessenden	Maximum..	35	21	29	21	2	12	25	34	44	43	50	53	44	48	47	54	47	54	65	72	65	66	69	64	44	36	50	52	59	50	44.9	
	Minimum..	15	-6	-5	-3	-17	-21	-9	10	17	18	27	29	33	32	31	30	27	28	23	30	36	33	36	41	40	35	28	27	31	30	33	21.3
Fullerton	Maximum..	35	34	27	23	5	11	24	31	37	44	41	49	54	46	47	44	52	48	51	59	63	73	63	72	62	51	44	55	61	62	60	46.1
	Minimum..	16	0	-3	4	-5	-17	-5	14	23	17	30	25	30	33	34	32	30	35	29	27	32	35	41	42	47	43	35	30	31	30	39	24.3
Garrison	Maximum..	36	18	29	16	8	17	35	39	43	42	45	55	52	41	51	46	53	44	56	64	70	67	67	66	47	42	32	51	54	55	47	44.8
	Minimum..	16	-4	10	-8	-18	-14	-3	3	22	25	29	27	31	33	32	29	25	27	25	28	35	31	39	40	40	32	26	28	31	29	34	21.9
Golva	Maximum..	35	26	33	13	3	20	34	46	44	53	46	58	50	46	49	48	49	52	65	67	71	63	49	43	44	32	53	52	54	49	45	45.0
	Minimum..	9	2	10	-14	-26	-16	10	6	24	25	24	22	26	22	25	21	20	26	25	26	30	26	31	40	38	29	22	25	28	32	31	19.3
Grafton	Maximum..	37	34	24	24	19	19	31	31	39	41	49	53	58	54	42	45	46	49	61	66	68	60	63	57	55	55	44	46	57	56	46	46.1
	Minimum..	20	-1	4	0	-9	-8	1	9	19	24	32	27	31	33	32	29	32	27	37	28	47	32	33	43	46	46	34	31	29	31	35	25.0
Grand Forks Airport	Maximum..	36	16	21	18	8	19	31	30	40	46	51	51																				

Daily Precipitation for March 1945

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James				.07	.02																				.02	.12	.35	.32				0.90	
Casselton	Red				.04											.25	.20	.20									.45	.20					1.34	
Cooperstown	Sheyenne				.10											T				.25							.11	.48	.10	T			1.04	
Courtenay	James				.04														.10						.38				.20		T	.33	1.05	
Devils Lake ^{1 5}	Devils Lake		T	.02	.09	T			T					T	T	T								T	T	T	1.10	.32	.13	T			.04	1.70
Edgeley	James				.09												.03							T	T	T	.36	.10	T				.03	1.61
Edmore	Devils Lake				.04											.05	.41									.12	.24	.79	.25				.05	1.44
Ellendale	James				.09											.05	.87	.07								.27	.21	.01	T		T	.15	1.20	
Fargo ^{1 5}	Red		T	T	.10	.01										.05	.40								T	.17					T	.12	1.21	
Forman	Sheyenne				.05											.04	.14	.18	T					T			.18	.21		.01		T	.09	0.99
Fullerton	James				.23																													
Gackle	do																																	
Grafton	Red				T											.05		T							T	.14	.56	.12	.01	.04		T	.09	0.91
Grand Forks Airport ³	do		T	T	.09											T	.02	T	.09						T	.47	.30	.06	T			T		1.03
Hankinson ²	do					.02										.14	.20	.37														.01	0.92	
Hannah	Pembina				T	.05																					T	.18						1.31
Hillsboro	Red		T	T	.09	T										T	.10	.03		.09					.10	.46	.17	.08	T	.02			1.04	
Jamestown Airport ³	James		T	T	T	.07	T		T	T						T	T		.01								.18	.03	.14	T			.34	0.77
Langdon	Pembina				.14											T										.05	.22	.98	.40	.03	.03			1.85
Larimore	Red					.08														.03														
Lisbon	Sheyenne					.03										.16	.36	.17									.38	.32	.26	T			1.07	
Mayville	Red		T		.14	.02												.01			.06						.14	.10			.04		1.00	
McHenry	James				.10	T																					.35	.13	.13	.04			.08	1.13
McLeod	Sheyenne				T											.04	.88			.05							.30	.40	.23			.05	1.45	
Oakes ²	James				T	.02										.15	.48	.10									.09	.21		T		T	1.03	
Park River	Red				.01	.02																					.54	.28	.16					1.01
Pembina Airport ³	do		T	T	.01										T	T			T						T	.55	.73	.13	.04			T	1.46	
Petersburg	do				.06																				T	.45	.17						.09	0.68
Sharon	do				.10														.07	.16				.01	T	.45	.17						1.21	
Valley City	Sheyenne				T	.05										.06	.02										.60	.10	.08	T			.01	0.61
Wahpeton	Red				T	T										.23	.73	.03						T	T	.38	.06	.04	T		T		1.61	
Middle Division																																		
Ashley ³	Missouri				.09	T		T								T	.01								.06		.23	.03	T	T		T	.07	0.49
Bisbee	Devils Lake				.10																				T	.08	.2	.42	.60				3.20	
Bismarck Airport ^{1 5}	Missouri				.01	.08	T		T							T			T					.19		.43	.02	.05			T	.20	0.98	
Bottineau ²	Mouse														T																			2.15
Butte	do				.13											.04										.04	.45	.45	.35			.20	1.66	
Carson	Heart				.03											.10			.03						.02	.22	.44	.18	.10		.05	1.17		
Center	Missouri				T	.31										.07									.17		.43	.05	.10		T	.20	1.38	
Drake ²	Mouse				.08																					.02	.18	.27	.63			.07	1.25	
Dunseith	do																																	
Eckman	do				.05											.15											.80	1.11	.50				2.61	
Fessenden	James				.10																				.10		.98	.05	.05	.10			1.38	
Fort Yates	Missouri				.10																				.10	.75		T			.08	.22	1.25	
Foxholm	Mouse		T		.02	.02									T	.14	.08										.01	.79	.34	.03			1.43	
Garrison ³	Missouri				.08	.13										.26									.09		.98	.15	.09		.15	1.93		
Granville	Mouse															T	.33	.60	.30							T	.33	.60	.30	T		1.23		
Hansboro	Devils Lake				.07											T	.83	1.13	.13	.15					.03	.83	1.13	.13	.15		T	2.34		
Linton	Missouri				.08	.03											.02								.12		.05	.13	.03	.02		T	0.48	
Laddock	Sheyenne				.12											T				T	T					.07	.27	.81	.26	T			1.53	
Mandan ²	Missouri				.07	.11										T	.11	.31	T	T						.11	.31	T	T	.02			0.62	
Max ²	do					.06										.15	T									T	.24	.20	.36	T		T	1.01	
McClusky	do				.18											T									.01	T	.24	.20	.36	T		T	1.14	
Minot Airport ³	Mouse				.13											.07									T	T	.15	.35	.26		.03	1.03		
Mohall	do		T		.18											.13			.01								.06	1.06	.74		T	2.18		
Napoleon ²	Missouri				.02											T										.09	T	.13	.02	.03		.09	0.38	
New Salem	Heart				T	.13											.05			.04					.02	.36	.73	.02	T		.12	1.47		
Pettibone	James				.10												.01		T						.01				.04		.09	0.25		
Rolla	Devils Lake				.17																				T	1.00	1.26	.39	.03				2.85	
Rugby	Mouse				.20										T	.10											.95	1.15	.45				2.85	
Selfridge	Missouri				.25											.10	.10		T				.10	T			1.25	.15	.10		.10	2.05		
Steele	do																																	
Towner	Mouse				.02																							.46	.93	.41			T	1.82
Turtle Lake	Missouri				.17												.03								T	.07	.46	.22	.08			.14	1.17	
Tuttle	do				.02	.16	.01													.03				.10	.03		.13	.02			.25	0.75		
Underwood	do				.27																						.56	.08	T		T	.23	1.14	
Velva	Mouse				.21											.04								T	.02	.81	.47	.24			.22	2.01		
Washburn	Missouri				T	.19													T					T	.13	.33	.07	T			.20	0.92		
Westhope	Mouse					.03										T											.52	1.24	.46			T	2.25	
Willow City	do				.05											T											.51	1.47	.33			T	2.36	
Wishek ²	Missouri					.05											.01								.09	.01	.13	T		.01		T	0.30	
Western Division																																		
Alpha	Lit. Missouri				.04	T									T		</																	

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

^b Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 5-12-45-1050]

551.05
UNNT
1/54⁴

Net Hist.

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LIV BISMARCK, N. D., APRIL 1945 No. 4

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

April was cold and windy. It was less springlike than the last 2 weeks of March. The coldest weather occurred during the first week and from the 18th to the 21st. The precipitation averaged below normal but as most of it fell as snow, the snowfall was above normal. Snowfall was quite heavy on the 1st, 10th, and 25th, and many automobiles were in ditches on the 10th due to heavy, wet snow. Farm work was slightly later than average in getting started due to wet and frozen ground, but spring wheat seeding was well along in the southwestern part of the state by the close of the month. Pastures were greening very slowly and afforded little or no feed at the close of the month. A raging prairie fire on the 16th burned over an area about 20 miles wide and 5 miles long near Williston.

TEMPERATURE

The mean temperature for the state was 38.0°, or 3.5° below the 1892-1945 average for April. The mean temperature for the eastern division was 38.0°; for the middle division, 37.9°; and for the western division, 38.1°. The highest mean temperature was 42.2° at Wahpeton, and the lowest, 33.6° at Edmore and Stanley, making a range in mean temperature of 8.6°. The absolute range was 74°, from 80° at Ellendale and Oakes on the 8th, to 6° at Dickinson on the 4th. The average daily excess in temperature for the state since January 1, 1945, is 4.3°.

PRECIPITATION

The average precipitation for the state was 1.10 inches, or 0.33 inch more than the 1892-1945 average for April. In the eastern division the average amount was 1.52 inches; in the middle division, 0.82 inch; and in the western division, 0.97 inch. The greatest monthly amount reported was 3.19 inches at Forman; the least, 0.34 inch at Bowbells. The greatest amount recorded in any 24 consecutive hours was 1.62 inches at Fullerton on the 10-11th. The accumulated excess in precipitation for the state since January 1, 1945, is 0.05 inch. The average snowfall was 4.5 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.61	14	29.25	9	14.2	42	nw.	17	75	81	53	50	52	752
Devils Lake....	30.61	13	29.37	9	11.0	31	ne.	1	77	80	63	60	37	852
Fargo	30.65	14	29.33	16	14.0	34	n.	16	83	87	65	66	52	773
Williston.....	30.52	14	29.34	9	9.2	28	nw.	17	70	78	51	43	58	800

† And other dates.

SILENT OBSERVERS

The weather bureau reports with sincere regret the death of Mr. P. C. Wick, Cooperative Observer at Mott since October 1, 1939. Mr. Wick's reports were prompt, well rendered, and most useful to the Weather Bureau.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	2	...	2	1	...	5	4	3	3	10	6	1	...	2	...	1	5	2	...	2	2	3	...	1	...	1	...	1	...	1	...
Lunar halos...
Solar halos...
Sleet	1	...	...	...	2	1	1	...	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thundrims...	3	2	...	...	...	...	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.6	75	-2	2.58	3.09	2.29	2.65	6.3	7	10	6	14
1893...	34.3	77	-8	2.45	1.56	1.09	1.70	7.8	6	7	9	14
1894...	42.8	92	12	3.66	2.93	2.50	3.03	4.4	9	8	10	12
1895...	49.6	87	10	2.10	2.38	2.20	2.23	0.0	5	13	8	9
1896...	40.1	92	2	5.50	3.73	2.18	3.80	5.1	9	9	8	13
1897...	40.8	93	-7	0.80	1.20	1.24	1.08	1.1	5	12	8	10
1898...	41.9	87	-4	1.38	1.36	1.40	1.38	0.5	5	14	8	7
1899...	38.0	86	-22	1.46	1.31	1.31	1.36	6.3	6	12	10	8
1900...	49.3	93	11	0.75	0.75	1.05	0.85	T	3	20	6	4
1901...	44.5	92	10	1.40	0.72	0.82	0.98	0.3	4	12	9	9
1902...	40.2	87	-2	1.35	0.88	0.95	1.06	2.9	3	12	8	10
1903...	42.5	83	8	1.67	1.10	0.92	1.23	2.7	5	16	6	8
1904...	37.4	91	2	2.22	1.21	0.72	1.38	8.1	5	13	5	12
1905...	40.2	83	3	1.04	0.38	0.11	0.51	3.7	3	15	8	7
1906...	46.7	88	8	1.96	1.06	1.48	1.50	1.3	5	14	7	9
1907...	31.9	80	-6	0.77	0.36	0.44	0.52	4.2	4	10	9	11
1908...	43.9	91	-19	1.12	1.53	1.91	1.52	5.9	5	16	6	8
1909...	34.2	80	3	0.95	0.71	0.64	0.77	5.1	6	10	9	11
1910...	48.0	96	4	1.52	1.03	1.56	1.37	2.9	4	16	8	6
1911...	41.5	90	-5	2.12	0.80	0.64	1.19	6.3	5	15	6	9
1912...	44.4	88	2	2.61	2.32	2.22	2.35	1.7	7	14	8	8
1913...	46.8	94	11	1.00	0.70	0.23	0.64	2.4	4	16	6	8
1914...	40.9	84	2	2.49	1.31	0.58	1.46	2.8	6	9	10	11
1915...	50.3	99	5	1.42	0.98	0.68	1.03	T	5	15	8	7
1916...	39.2	79	-6	1.70	1.07	1.54	1.44	2.9	5	10	10	10
1917...	37.2	73	5	1.89	1.67	1.49	1.68	5.6	7	9	9	12
1918...	41.4	81	0	2.38	1.87	2.28	2.18	3.0	7	12	8	10
1919...	42.3	79	6	1.45	1.40	1.72	1.52	6.2	6	11	9	10
1920...	32.1	63	-11	0.73	0.67	1.12	0.84	2.1	5	13	8	9
1921...	41.1	91	1	1.84	2.07	1.40	1.77	3.8	7	14	7	9
1922...	42.3	89	-2	1.17	0.79	0.79	0.92	2.3	6	10	9	11
1923...	38.7	89	-15	1.22	1.63	1.51	1.45	7.2	5	13	8	9
1924...	39.3	84	6	3.94	2.31	1.35	2.53	7.5	9	8	9	13
1925...	47.8	85	10	2.21	1.37	1.22	1.60	T	6	11	10	9
1926...	42.8	98	-4	0.17	0.34	0.32	0.28	0.9	3	17	8	5
1927...	41.4	95	7	2.05	1.46	1.67	1.73	2.3	7	10	8	12
1928...	35.9	84	-6	0.92	0.88	0.92	0.91	5.0	5	12	10	8
1929...	41.5	85	-9	1.68	1.36	0.88	1.31	3.4	6	12	9	9
1930...	47.3	86	8	1.16	1.14	1.45	1.25	0.5	6	14	7	9
1931...	44.1	87	3	0.75	0.37	0.18	0.43	0.7	2	18	8	4
1932...	44.1	79	0	2.50	2.09	1.84	2.14	0.7	8	9	9	12
1933...	40.0	84	2	1.44	1.20	1.35	1.33	7.3	5	11	9	10
1934...	43.7	95	7	0.75	0.34	0.24	0.44	1.9	3	15	8	7
1935...	38.4	83	0	2.62	1.75	1.42	1.93	3.6	8	9	9	12
1936...	35.6	87	-15	0.53	0.26	0.37	0.39	0.5	4	14	10	6
1937...	40.7	79	2	3.44	1.56	1.06	2.02	5.8	8	8	9	13
1938...	42.8	90	1	1.68	0.96	0.64	1.09	0.1	5	11	10	9
1939...	41.6	90	-1	0.93	0.66	1.03	0.87	0.8	6	12	9	9
1940...	37.8	78	-9	1.84	2.36	2.45	2.22	4.1	8	7	10	13
1941...	44.1	82	6	3.05	2.13	1.71	2.30	1.6	13	6	9	15
1942...	44.9	90	-6	2.12	1.75	2.01	1.96	3.3	7	11	9	10
1943...	44.9	83	11	1.46	1.56	1.42	1.48	0.1	5	15	10	3
1944...	40.8	77	-11	0.74	0.83	0.84	0.80	0.2	4	14	7	9
1945...	38.0	80	6	1.52	0.82	0.97	1.10	4.5	6	7	12	11
Period	41.5	99	-22	1.74	1.33	1.23	1.43	3.1	6	12	8	10

Climatological Data for April 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Carrington	Foster	1,579	48	36.3	-3.3	71	27	16	18	0.60	-0.73	0.30	1	3.9	4	12	11	7	nw.	Soo Line Agent.
Casselton	Cass	934	50																	C. Hayford.
Cavallier	Pembina	894	38	35.7		62	27	18	21	2.59	+1.20	0.73	10-11	5.0	9	8	6	16	nw.	City Light & Power Co.
Colgate	Steele	1,180	12								-0.07	0.55	10	2.0	4	6	24	4	ne.	O. M. Jeusen.
Cooperstown	Griggs	1,428	49	39.8	-0.5	73	9†	18	14†	1.04	-0.35	0.58	10-11	9.0	5	2	16	12	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	15								-0.85	0.48	10	T	4	12	11	7	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	36.6	-2.2	69	27	21	3	0.66	-0.86	0.28	10-11	3.0	8	4	8	18	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	45	40.2	-2.4	78	8	19	18	2.05	+0.30	0.64	10	T	7	10	13	7	n.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	22	33.9	-5.4	69	27	16	13	0.85	-0.41	0.50	10	3.0	5	14	7	9	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	40.2	-2.5	80	8	20	4†	2.58	+0.72	1.33	10-11	2.4	7	9	6	15	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	65	39.2	-1.4	70	8	23	14	2.03	-0.15	0.66	10	4.0	9	4	13	13	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	54	41.0	-3.0	79	8	21	5	3.19	+1.18	1.27	10	7.0	5	14	8	8	n.	Helge Dyste.
Fullerton	Dickey	1,439	48	40.6	-2.1	78	8	20	5	2.84	+0.70	1.62	10-11	2.8	7	5	12	13	nw.	F. O. Alin.
Gackle	Logan	1,951	15																	Jack Dixon.
Grafton	Walsh	827	54	38.0	-2.6	64	27	19	21	0.92	-0.42	0.49	10-11	3.7	6	6	11	13	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	55	37.8	-3.5	66	8	16	21	1.76	+0.10	0.97	10-11	4.5	11	11	10	9	n.	University of N. Dak.
Grand Forks Aprt., 2½ mi. W	Grand Forks	832	5	36.8		66	27†	13	21	1.18		0.89	10-11	2.5	9	2	11	17	uw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	39.1	-4.4	78	8	20	14†	2.01	0.00	0.41	16	5.9	11	9	6	15	nw.	Soo Line Agent.
Hannah	Cavallier	1,568	52	34.5	-3.4	64	27	15	13†	0.64	-0.48	0.37	10-11	4.9	3	1	8	21	nw.	A. E. Prior.
Hillsboro	Trail	901	40	39.2	-3.0	69	8	21	14	2.15	+0.27	1.48	10	2.0	9	7	11	12	ne.	Alfred Jahuke.
Jamestown, 2 miles SE	Stutsman	1,457	54	40.0	-1.7	72	8	19	14	1.34	-0.36	0.55	10	1.0	6	5	16	9	nw.	N. Dak. State Hospital.
Jamestown Airpt., 2 mi. NE.	Stutsman	1,494	5	37.5		73	8	18	14†	0.69		0.36	10	0.5	6	6	10	14	n.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	37.8		70	27	15	4†	0.41		0.28	1	1.6	3	11	11	8	nw.	U. S. Wildlife Refuge.
Langdon, 1 mile E	Cavallier	1,615	50	35.2	-2.4	65	27†	15	21	1.42	+0.19	0.75	10-11	7.8	11	2	10	18	n.	V. Sturlaugson.
Larimore	Grand Forks	1,134	53	36.2	-4.0	67	27	14	21	0.99	-0.61	0.57	11	0.4	9	16	5	9	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	42	39.0	-3.1	78	8	20	14	2.60	+0.67	1.11	11	8.2	7	9	7	14	sw.	J. O. Halverson.
Mayville	Trail	975	50	39.2	-3.3	69	8	20	14	1.55	0.00	1.03	10-11	0.3	10	4	16	10	n.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	23	36.2	-4.4	69	27	15	4	0.71	-0.66	0.32	10-11	0.4	7	6	12	12	ne.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	34	41.5	-2.1	79	8	20	15†	1.98	-0.01	0.70	10	9.3	5	12	9	9	nw.	J. G. Carlson.
McVille	Nelson	1,467	4									0.48	10-11	T	2	1	21	8	ne.	A. M. Casad.
Oakes	Dickey	1,318	17	39.2	-3.6	80	8	20	14	2.55	+0.68	1.27	10-11	2.0	6	9	4	17	nw.	F. H. Murray.
Park River	Walsh	998	42	34.6	-5.9	65	27	12	13†	1.03	-0.29	0.48	10	1.9	4	12	8	10	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	803	72	34.2	-4.3	64	28	11	21	1.88	+0.62	0.88	28-29	3.2	9	0	15	15	n.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	15	35.4		68	27	16	3	0.59	-0.80	0.19	10†	1.0	4	8	15	7	nw.	T. C. Overland.
Sharon	Steele	1,516	22	37.5	-2.1	69	27	17	14	0.81	-0.67	0.62	10-11	0.1	9	4	13	13	n.	Nels O. Grefsheim.
Valley City	Barnes	1,229	41	40.6	-1.8	73	8	21	14†	2.43	+0.87	0.92	1	T	7	13	10	7	nw.	I. C. Robertson.
Walperton	Richland	962	54	42.2	-2.0	76	9	20	14†	1.89	-0.19	0.75	15-16	6.1	9	5	15	10	nw.	W. J. Cavanaugh.
Average for Eastern Division				38.0	-3.2	80	8	11	21	1.52	-0.22	1.62	10-11	3.1	7	7	11	12	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	50	38.8	-3.6	77	8	17	5	1.39	-0.22	0.70	22	1.3	6	6	9	15	n.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	43	36.4	-4.3	73	27	13	14	1.03	-0.16	0.49	10-11	5.0	6	8	14	8	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	71	40.6	-2.5	71	8†	19	4	1.24	+0.05	0.51	10-11	7.5	3	5	11	14	nw.	U. S. Weather Bureau.
Bismarck Airpt., 2½ mi. SE.	Burleigh	1,650	6	40.0	-0.4	72	27	20	4	0.98	-0.54	0.45	10-11	5.6	6	5	11	14	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	54	34.2	-4.8	69	27	13	2	0.91	+0.07	0.30	22	2.0	5	8	8	14	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	21	38.0	-3.3	72	27	14	3	1.11	-0.19	0.70	10	9.0	7	6	7	17	nw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	34	38.8	-3.7	73	8	9	4	1.50	+0.15	0.90	10-11	10.0	3	4	19	7	nw.	J. W. Evans.
Center	Oliver	2,100	8	39.0		72	27	14	4	1.11		0.54	1	7.7	4	5	18	7	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	37.6	-2.8	72	27	18	2†	0.86	-0.31	0.57	10-11	6.1	5	12	6	12	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	50	35.0	-4.5	69	27	13	18	0.58	-0.26	0.32	10-11	5.9	4	8	10	12	n.	State Tuberculosis San.
Eckman	Bottineau	1,500	40	36.8	-3.6	70	27	13	2	0.69	-0.22	0.20	11	2.0	6	5	17	8	nw.	E. R. Sherman.
Fessenden	Wells	1,610	34	38.2	-2.2	70	27	19	4†	0.53	-0.79	0.22	10†	2.7	5	9	13	8	nw.	John V. Zuber.
Fort Yates	Sioux	1,670	46	41.6	-3.2	71	27	17	4†	1.25	-0.10	0.75	10	2.0	2	19	6	5	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE.	Ward	1,637	25	35.8	-5.0	69	27	11	2	0.44	-0.81	0.12	25	0.1	8	11	7	12	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	69	37.9	-4.2	71	27	16	2	0.81	-0.35	0.41	10-11	7.9	5	6	10	14	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	39	38.0	-2.8	74	27	16	2†	0.77	-0.17	0.27	10-11	3.5	6	16	8	6	nw.	Fred Koble.
Hansboro	Towner	1,597	38	34.2	-4.4	67	27	17	2†	0.77	-0.48	0.20	22	9.8	7	8	15	7	nw.	W. E. Disher.
Harvey	Wells	1,596	43																	Orville Hoksche.
Leeds	Benson	1,515	5	37.9		72	27	18	1	0.88		0.41	11	5.9	8	1	21	8	nw.	John Dulmage.
Linton	Emmons	1,711	29	41.8	-1.0	77	8	17	18	1.10	-0.18	0.44	10-11	3.0	5	3	12	15	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	31	38.2	-2.4	72	27	18	4†	0.61	-0.51	0.29	10	3.5	6	3	17	10	nw.	A. T. Felland.
Mandan, 1½ miles SW	Morton	1,750	32	39.4	-3.2	72	27	18	17†	1.17	-0.11	0.78	10-11	6.7	2	4	2	24	nw.	No. Gt. Plains Field Sta.
Max	McLean	2,093	17	35.9	-4.7	70	27	11	2	1.09	-0.16	0.78	10-11	4.5	3	7	5	18	nw.	Soo Line Agent.
McClusky	Sheridan	1,943	28	39.2	-1.9	70	27	17	18	1.27	+0.03	1.03	10-11	8.0	4	10	11	9	nw.	F. W. Perry.
Medina>																				

Climatological Data for April 1945—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Fairfield, 9 1/4 miles N.	Billings	2,650	17	.....	.....	.....	.....	.....	.....	0.83	-0.39	0.51	24-25	4.7	6	10	8	12	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	28	38.6	.....	71	27	12	4	2.14	+0.85	0.91	1	11.0	6	5	14	11	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	5	37.6	-4.6	74	21	11	4	0.74	-0.44	0.41	24-25	6.8	7	3	15	12	nw.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	38.4	-0.9	67	27	13	18	0.81	-0.22	0.26	11	5.0	6	15	7	8	n.	L. D. Nielson.
Halliday	Dunn	2,073	4	.....	.....	.....	.....	.....	.....	0.85	.....	0.42	1	7.0	4	6	14	10	nw.	John Kisse.
Hettinger	Adams	2,675	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. W. Anderson.
Kenmare	Ward	1,799	14	36.6	-3.6	67	27	17	21	0.49	-0.43	0.22	11	2.4	4	12	6	12	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	41.8	-1.4	76	21	11	4	1.27	+0.20	0.50	10-11	8.0	5	15	9	6	nw.	S. P. Grane.
Medora	Billings	2,271	31	41.8	.....	74	21	15	4	2.43	+1.28	0.78	23-24	4.0	4	16	8	6	w.	Harry Roberts.
Mott	Hettinger	2,424	39	40.2	-2.1	71	8	11	4	0.76	-0.46	0.35	24	5.2	5	1	15	14	nw.	Oscar W. Wick.
New England	Hettinger	2,621	54	40.8	-1.6	71	8	13	3	2.57	+1.37	1.28	24	4.0	5	6	13	11	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	.....	4	39.0	.....	69	27	9	4	1.73	.....	1.08	1	12.5	6	12	11	7	nw.	Peter F. Fick.
Parshall	Mountrail	1,929	31	37.6	-1.4	69	27	12	18	0.45	-0.62	0.16	1	3.4	6	1	28	1	nw.	C. E. Schubert.
Portal	Burke	1,954	32	35.2	-5.4	67	27	14	18	0.40	-0.54	0.20	10-11	5.0	4	6	12	12	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	37.3	-2.7	66	27	11	18	0.45	-0.69	0.20	11	7.0	5	6	15	9	nw.	E. J. Lewis.
Richardton, 1 1/2 miles N.	Stark	2,467	30	39.4	-2.0	69	27	14	4	1.74	+0.52	1.08	1	8.0	4	8	11	11	nw.	Assumption Abbey.
Ryder	Ward	2,108	17	.....	.....	.....	.....	.....	.....	0.39	-0.72	0.13	1	2.2	8	12	7	11	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	36.2	-5.5	70	27	16	18	0.92	-0.20	0.33	1	6.0	5	3	22	5	.....	H. J. Bugge.
Stanley	Mountrail	2,258	8	33.6	.....	67	27	13	18	1.31	.....	0.39	10	7.8	7	4	19	7	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	17	.....	.....	.....	.....	.....	.....	0.42	-0.73	0.11	25-26	3.9	9	6	14	10	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	17	.....	.....	.....	.....	.....	.....	0.66	-0.32	0.26	10	2.9	5	3	15	12	nw.	Morris J. Pederson.
Trotters	Golden Valley	.....	20	.....	.....	.....	.....	.....	.....	1.32	+0.27	0.84	24-25	5.4	4	1	25	4	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	38.6	.....	72	27	15	18	0.46	.....	0.18	1	2.0	7	5	13	12	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	39.2	-2.2	68	27	13	17	1.28	+0.11	0.54	25	5.0	5	3	24	3	nw.	J. C. Zeller.
Wildrose	Williams	2,258	16	.....	.....	.....	.....	.....	.....	0.53	-0.43	0.15	28	2.3	7	16	9	5	nw.	Jonathan Winkjer.
Williston	Williams	1,878	67	38.4	-3.6	68	27	16	4	0.43	-0.77	0.20	25	3.2	7	4	11	15	nw.	U. S. Weather Bureau.
Average for Western Division				38.1	-3.3	76	21	6	4	0.97	-0.26	1.28	24	5.2	6	8	12	10	nw.	
Average for the State				38.0	-3.5	80	8	6	4	1.10	-0.33	1.62	10-11	4.5	6	7	12	11	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

* Best available used for stations not equipped with recorders.

Daily Temperatures for April 1945

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum ...	38	27	31	35	55	60	62	77	58	38	43	57	38	46	48	40	34	49	54	61	50	60	51	51	54	53	68	67	53	58	...	50.5
	Minimum ...	22	21	21	19	17	34	37	39	35	29	28	21	18	24	28	22	19	32	25	25	34	27	27	32	29	31	36	27	22	...	27.0	
Bismarck Airport ...	Maximum ...	37	30	33	37	56	59	63	72	50	36	43	50	40	51	61	46	36	54	60	61	55	58	54	51	51	72	64	51	63	...	51.5	
	Minimum ...	26	22	23	20	22	36	30	33	36	30	28	26	25	22	28	32	25	21	36	34	29	33	27	27	34	32	29	38	29	22	...	28.5
Bottineau	Maximum ...	24	37	38	47	54	46	43	46	40	43	37	40	37	53	49	40	34	50	42	44	48	48	42	46	48	47	69	51	48	51	...	44.7
	Minimum ...	22	13	15	18	22	26	25	28	30	21	27	21	17	22	31	28	19	14	23	24	26	29	19	23	27	29	31	36	27	18	...	23.7
Carson	Maximum ...	43	31	33	33	56	60	66	73	62	39	45	53	44	51	62	48	38	56	65	64	58	48	47	45	46	55	60	55	56	64	...	51.9
	Minimum ...	25	18	18	9	15	32	31	34	35	27	22	26	22	19	22	30	18	15	30	35	33	39	22	34	31	29	35	20	22	...	25.7	
Crosby	Maximum ...	28	29	33	42	55	51	54	44	35	45	40	45	44	55	51	43	33	56	60	56	63	44	50	48	45	51	67	40	52	63	...	47.4
	Minimum ...	25	18	20	16	20	30	22	23	28	19	26	25	18	22	29	25	20	15	22	26	29	32	21	22	30	29	33	32	26	25	...	24.3
Devils Lake	Maximum ...	38	30	34	37	54	53	50	60	42	35	36	46	35	51	56	43	33	46	41	35	44	52	41	45	48	50	69	61	43	56	...	45.5
	Minimum ...	23	22	21	23	26	34	30	34	32	30	31	29	21	24	31	29	25	21	24	24	24	33	26	24	29	32	33	33	32	29	...	27.6
Dickinson Airport.....	Maximum ...	32	34	28	30	54	54	59	66	47	37	45	47	41	50	54	45	34	54	65	61	67	51	55	41	37	45	68	48	51	66	...	48.9
	Minimum ...	16	16	10	12	26	31	29	33	31	25	22	29	22	23	26	28	19	17	35	35	35	29	21	32	31	31	32	28	26	28	...	25.9
Dunn Center	Maximum ...	28	29	33	35	53	54	58	54	43	41	45	47	43	52	49	45	33	54	63	60	63	48	53	41	33	48	68	50	50	65	...	47.9
	Minimum ...	24	18	18	15	16	26	23	26	34	24	23	22	19	21	26	24	21	15	18	33	28	36	21	24	27	28	32	35	25	22	...	24.1
Fargo Airport	Maximum ...	40	32	33	38	53	62	56	70	69	41	56	55	37	48	48	36	35	44	43	45	41	50	44	46	53	52	66	65	44	55	...	48.6
	Minimum ...	27	27	28	28	25	34	29	36	39	33	34	33	27	23	31	31	29	28	26	24	37	27	25	32	30	34	37	29	25	...	29.8	
Fessenden	Maximum ...	41	31	35	40	57	60	57	67	53	40	40	50	44	53	58	42	37	49	48	48	44	55	54	48	53	49	70	65	49	60	...	49.9
	Minimum ...	25	20	22	19	22	33	26	33	34	28	29	30	22	21	29	33	24	19	21	25	23	32	23	21	26	32	29	38	31	24	...	26.5
Fullerton	Maximum ...	53	30	33	35	54	60	59	78	67	42	44	58	42	46	50	46	37	48	50	63	46	62	50	52	53	54	70	63	53	57	...	51.8
	Minimum ...	29	22	24	21	20	35	35	33	42	31	34	27	27	22	24	34	27	22	31	30	24	38	29	28	30	35	32	36	38	25	...	29.3
Garrison	Maximum ...	37	30	32	41	56	58	57	63	46	44	40	49	41	53	52	44	36	53	59	60	56	51	51	50	45	48	71	56	49	61	...	49.6
	Minimum ...	23	16	22	19	23	31	25	31	30	27	27	25	22	23	28	29	21	17	30	31	31	32	23	26	30	32	32	35	24	22	...	26.2
Golva	Maximum ...	32	25	30	37	56	56	60	70	46	42	47	47	44	51	50	46	35	57	65	62	74	50	56	42	39	50	68	57	51	70	...	50.5
	Minimum ...	19	16	13	11	28	26	24	31	28	25	23	25	22	26	25	18	15	36	33	33	26	21	31	30	30	32	28	22	25	...	24.8	
Grafton	Maximum ...	52	34	35	40	52	52	51	58	58	44	39	50	48	53	53	50	39	46	45	32	40	47	48	44	48	51	64	63	55	54	...	48.2
	Minimum ...	25	25	24	27	25	32	28	32	24	32	32	30	22	32	25	35	23	22	19	32	28	22	29	29	28	42	32	25	...	27.9		
Grand Forks Airport.	Maximum ...	42	32	35	40	55	59	54	65	60	44	41	51	36	49	50	39	33	44	37	31	41	48	41	44	49	52	66	66	41	54	...	46.6
	Minimum ...	26	24	26	24	24	30	28	37	33	32	32	29	23	22	31	31	25	20	27	21	13	33	26	22	30	27	27	37	26	25	...	27.9
Jamestown Airport...	Maximum ...	31	33	38	39	55	60	58	73	55	38	43	53	39	50	50	40	38	47	50	53	38	62	49	48	53	50	68	64	49	56	...	49.6
	Minimum ...	23	22	22	20	20	32	27	33	34	30	29	27	22	18	25	28	25	19	26	23	20	32	27	23	28	28	26	37	28	18	...	25.5
Kenmare/	Maximum ...	30	35	35	43	60	52	54	46	36	44	40	48	43	55	50	46	35	54	55	56	56	46	49	47	48	50	67	42	50	57	...	47.7
	Minimum ...	25	17	17	19	23	32	24	25	30	21	26	25	18	23	35	27	22	19	23	27	29	33	21	23	30	31	35	34	24	27	...	25.5
Langdon	Maximum ...	50	38	42	43	55	43	44	47	42	38	34	45	40	51	50	47	35	43	37	36	47	42	40	45	53	65	65	43	53	...	45.5	
	Minimum ...	22	19	27	17	22	28	26	28	30	27	30	25	17	22	31	35	24	20	19	19	15	30	23	20	26	24	31	41	30	25	...	25.5
Marmarth	Maximum ...	50	50	35	34	56	56	63	70	69	41	46	52	51	58	58	49	41	59	65	65	76	70	46	54	40	63	70	63	64	68	...	55.5
	Minimum ...	23	13	14	11	19	31	35	31	33	28	25	25	25	18	25	25	22	11	31	36	43	42	25	40	34	31	35	35	34	34	...	27.5
Minot Airport	Maximum ...	33	30	33	38	53	46	51	39	38	38	45	37	54	50	41	33	51	51	54	51	48	45	50	46	45	69	48	46	57	...	45.5	
	Minimum ...	21	18	19	19	19	29	25	31	28	24	27	24	21	26	35	29	22	18	27	27	28	31	22	24	30	32	32	32	30	27	...	25.5
Mott	Maximum ...	44	29	30	31	56	58	71	64	44	48	49	45	50	60	47	41	48	68	65	67	62	56	53	44	50	70	63	54	67	...	52.2	
	Minimum ...	24	17	20	11	20	31	29	35	37	28	20	25	24	19	25	31	21	15	30	33	34	35	40	37	33	32	31	37	23	...	27.1	
Pembina Airport	Maximum ...	33	30	33	37	50	38	48	50	39	42	38	45	31	49	50	41	30	42	36	31	37	42	35	40	45	47	62	64	39	53	...	41.7
	Minimum ...	25	24	26	26	24	30	29	30	30	31	30	28	20	22	32	30	23	24	20	11	33	26	22	28	28	29	35	30	27	...	26.7	
Sharon	Maximum ...	43	32	35	40	54	61	56	64	54	42	40	52	43	51	51	41	38	45	38	33	41	59	45	43	50	54	69	60	44	55	...	47.6
	Minimum ...	24	22	20	22	20	35	36	33	35	31	31	29	22	17	29	34	27	21	26	20	32	28	20	27	29	30	42	33	21	...	27.1	
Steele	Maximum ...	40	30	35	42	52	61	60	71	66	44	42	50	45	50	51	54	39	49	54	56	50	60	49	49	52	69	66	50	60	...	51.5	
	Minimum ...	20	17	22	16	18	31	25	31	35	28	27	25	21	16	22	34	23	14	28	32	22	35	24	20	21	32	28	39	25	19	...	25.5
Valley City	Maximum ...	50	33	35	38	54	62	58	73	70	39	41	55	51	49	51	48	40	47	46	52	40	59	60	47	52	50	71	68	59	59	...	51.5
	Minimum ...	28	24	24	22	23	34	31	33	44	32	32	30	29	21	25	36	26	21	32	27	24	33	29	24	31	32	32	40	36	23	...	29.4
Wahpeton	Maximum ...	63	35	35	41	54	64	65	73	76	59	62	62	64	48	49	47	35	42	47	59	40	50	50	49	55	56						

Daily Precipitation for April 1945

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James	.30	T.								.16	.13																					0.60	
Casselton	Red.																																	
Cooperstown	Sheyenne	.22	T.		T.						.33	.25						T.					.11										1.04	
Courtenay	James										.48	.16						.10					.11										0.85	
Devils Lake ^{1 5}	Devils Lake	T.	T.		T.	T.	.01	T.	T.		.25	.03					T.	T.	T.			.03	.25						.03	.03			0.66	
Edgeley	James	.53	T.	T.	T.		.06				.64	.54				.09						.02	.17										2.05	
Edmore	Devils Lake	T.	T.		T.		T.	T.			.50							T.				.02	.20								.06		0.85	
Ellendale	James	.58									.70	.63	.05				.10						.45							.07			2.58	
Fargo ^{1 5}	Red.	.41	T.	.01	T.		T.	T.			.66						.65	.01	T.			.01	T.	.22						.04	.02		2.03	
Forman	Sheyenne	.37									1.27	.29					.84		T.				.42							.07			3.19	
Fullerton	James	.61	T.	T.	T.						.96	.66					.11	T.				.02	.36						T.	.12			2.84	
Gackle	do																																	
Grafton	Red.	T.	T.				T.				.06	.43						T.				.11	.01						.20	.11			0.91	
Grand Forks Airport ³	do	T.	.01	T.				T.			.88	.01			T.		.01	.01	T.			.10		.01					T.	.06	.02			
Hankinson ²	do	.22									.28	.21			.27		.41	.27				.02	.04	.23	.03								2.01	
Hannah	Pembina										T.	.37					T.	T.					.05	.22					T.				0.64	
Hillsboro	Red.	.16		T.				.01			1.24	.24					.11	.04		.03		.19	.22						.13				2.15	
Jamestown Airport ³	James	.07	T.	T.	T.						.36	T.					T.					.01	.22							.02			0.69	
Jargon	Pembina	T.	.02		T.		.08			.02	.40	.35					.03	.03				.20	.15							.06	.08	.01	1.42	
Larimore	Red.	.06								.03		.57									.06	.20	.03	.04									0.99	
Lisbon	Sheyenne	.75			T.	T.					.06	1.11					.35	.02			.06	.02	.03	.29						.10	.08		2.60	
Mayville	Red.	.14			T.			.03			.63	.40					.04	.01				.01	.24							.03	.02		1.55	
McHenry	James	.06			T.			.11	.05		.17	.15						T.	T.											.13	.04		0.71	
McLeod	Sheyenne	.35									.70						.58	T.					.30								.05		1.98	
Oakes ²	James	.65				T.					T.	1.27					.15	.16					.31							.01			2.55	
Park River	Red.				T.						.48											.16	.12						T.	.27			1.03	
Pembina Airport ³	do	T.	T.		T.		.06	T.	T.		.41	.07						.02	T.			.20			T.				.05	.87	.02		1.88	
Petersburg	do										.19	.39			T.			T.				T.	.02							.19			0.59	
Sharon	do	.01	T.	T.	T.		.05	.01			.28	.34			T.			T.				.01	.03						T.	.07	.01		0.81	
Valley City	Sheyenne	.32	T.		T.						.48	.55					.03	.03				.22	.23							.20			2.43	
Wahpeton	Red.	.93	T.	.01	T.						.22	.18			.12		.75					.03	.23	T.					T.	.02			1.89	
Middle Division																																		
Ashley ³	Missouri	.29	T.	T.			T.				.35	.01					.03	.01				T.	T.	.70					T.	T.		T.	1.39	
Bisbee	Devils Lake							.15			.20	.29										T.	.22						T.	.02	.15		1.03	
Bismarck Airport ^{1 5}	Missouri	.26	T.	T.	T.						.36	.09					T.	T.	.01			T.	T.	T.		T.	.01	T.		T.		.25		0.98
Bottineau ²	Mouse						.15					.25						T.				.10	.30								.11		0.91	
Butte	do	.15	T.					.01			.20	.50					T.	T.					.11					T.	T.	.10		.04	T.	1.11
Carson	Heart	.60									.60	.30						T.						T.									1.50	
Center	Missouri	.54	T.								.10	.37					T.						.10							T.			1.11	
Drake ²	Mouse	.02							T.	T.		.57																						0.86
Dunseith	do								T.	T.	.20	.32					.03	T.										.04	T.	.03		T.	0.58	
Eckman	do	T.					.10				.20						.03					.03	.18								.15		0.69	
Fessenden	James					T.	.06				.09	.13						T.											T.	.03		.22	0.53	
Fort Yates	Missouri										.75							T.						.50									1.25	
Foxholm	Mouse	T.				.03	.05	.08				.01										.03	.04						.12		.08		0.44	
Garrison ³	Missouri	.21						T.			.21	.20					T.		T.				.17				T.					.02		0.81
Granville	Mouse	T.					.20				T.	.27											.12					.09		.06	.03		0.77	
Hansboro	Devils Lake						.15				.08	.12						T.				.09	.20							.05	.08		0.77	
Linton	Missouri	.42									.31	.13					T.	.03					.21										1.10	
Maddock	Sheyenne	T.			T.			.08	T.		.21	.08						T.		T.			.17						.02		.05		0.61	
Mandan ²	Missouri	.39									.78									T.			T.						T.				1.17	
Max ²	do										.78											.27				T.			.04				1.09	
McClusky	do		T.				T.		T.	T.	.51	.52						T.					.07						.17	T.			1.27	
Minot Airport ³	Mouse	.26	T.			T.	T.	T.	T.	T.	.11	.04					.03		T.			T.		.05	T.		.15	.05	T.		.06		.03	0.75
Mohall	do	T.	T.				.12	T.			.27												.15						.03		.18		0.78	
Napoleon ²	Missouri	.24									.15	.05						T.						.14									0.58	
New Salem	Heart	.17									.09	.19											.05					.01	.02				0.53	
Pettibone	James	.59						T.			.10	.08																					0.77	
Rolla	Devils Lake	.02			T.		.08		T.	T.	.15	.37					.01						.19						T.	.12	.08		1.15	
Rugby	Mouse	T.						.02			.40	.20									T.	T.	.10										0.84	
Selfridge	Missouri	.25		T.							.25							T.					.20										0.70	
Steele	do	.41	T	T.			T.		.02		.08	.10			T.			T.				T.	T.										0.61	
Towner	Mouse							T.			.05	.59					T.																0.64	
Turtle Lake	Missouri	.12									.43							T.				.03	.13						T.	.03			0.74	
Tuttle	do	.23			T.			.02			.20	.04					.01	T.					T.							.01		T.		0.51
Underwood	do	.25		T.							.15	.45																					0.85	
Velva	Mouse	.15					.07	.03			.12	.30											.21				T.	.02		.01	T.		0.91	
Washburn	Missouri	.25						T.			.15	.29					T.																0.76	
Westhope	Mouse						.14					.28					T.						.25								.18		0.85	
Willow City	do	T.						T.			.12	.25					T.						.15								.15		0.67	
Wishek ²	Missouri	.33	.03	T.			.02				.08	.33											.24								.01			1.04
Western Division																																		
Alpha	Lit. Missouri	.39	T				</																											

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 6-16-45--1050]

5
T
45

Not Hist.

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIV BISMARCK, N. D., MAY 1945 No. 5

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The month of May was cool. It was the coolest May since 1924. It was also the first May since 1924 in which no readings above 84° were reported. The temperatures were uniformly cool throughout the month, but most stations in the southern part of the state had no frost after the 15th. The precipitation was below normal in all sections. It was fairly well distributed throughout the state. In a few sections there was not enough moisture to germinate the seeds early in the month, but with the showers later in the month and the available subsoil moisture crops were getting a good start, but were late. A few scattered stations had from 3 to 6 inches of snow, but most stations had only a trace or none at all. The first half of the month was windy and light to moderate dust storms occurred at many places, especially on the 6th and 7th. By the close of the month much farm work was completed, but crops and pastures were late. Livestock were in fair to good condition.

TEMPERATURE

The mean temperature for the state was 47.7°, or 5.8° below the 1892-1945 average for May. The mean temperature for the eastern division was 47.3°; for the middle division, 47.7°; and for the western division, 48.2°. The highest mean temperature was 52.1° at Linton, and the lowest, 43.0° at Edmore, making a range in mean temperature of 9.1°. The absolute range was 74°, from 84° at Milnor on the 23d, to 10° at Center on the 10th. The average daily excess in temperature for the state since January 1, 1945, is 2.3°.

PRECIPITATION

The average precipitation for the state was 1.54 inches, or 0.77 inch less than the 1892-1945 average for May. In the eastern division the average amount was 1.60 inches; in the middle division, 1.42 inches; and in the western division, 1.61 inches. The greatest monthly amount reported was 4.40 inches at Halliday; the least, 0.50 inch at Tuttle. The greatest amount recorded in any 24 consecutive hours was 3.40 inches at Halliday on the 31st. The accumulated deficiency in precipitation for the state since January 1, 1945, is 0.72 inch. The average snowfall was 0.5 inch.

MISCELLANEOUS PHENOMENA (Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	10	5	7	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lunar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hail	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thunderstms.	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity					
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12-1 p. m.	6-9 a. m.	12-30 p. m.	6-9 p. m.	Percentage of sunsh.	Degree
Bismarck	30.44	3	29.42	31	12.9	49	nw.	6	71	80	48	47	57	480
Devils Lake	30.45	3	29.48	11	9.7	36	nw.	6	73	82	59	59	46	592
Fargo	30.38	3	29.46	11	13.3	42	nw.	6	75	83	54	55	62	509
Williston	30.44	3	29.46	31	8.4	31	nw.	6	61	73	44	36	60	507

† And other dates.

COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	46.6	96	13	3.43	1.84	1.33	2.20	3.9	12	6	8	17	
1893...	52.2	97	19	1.29	1.14	2.40	1.61	0.2	6	11	8	12	
1894...	54.6	98	23	1.40	1.24	1.88	1.51	0.0	5	16	9	6	
1895...	54.4	101	15	2.60	2.88	2.57	2.48	0.0	8	10	11	10	
1896...	56.9	103	22	5.44	3.70	5.81	4.95	0.0	13	6	14	11	
1897...	55.4	97	16	0.85	0.61	0.60	0.67	T.	4	16	10	5	
1898...	52.7	92	14	1.95	1.84	2.15	1.98	0.0	5	15	9	7	
1899...	50.6	91	16	3.40	4.80	2.27	3.49	0.4	8	9	9	13	
1900...	59.2	106	15	0.78	0.70	0.69	0.69	0.0	3	18	8	5	
1901...	60.0	99	19	0.35	0.24	0.33	0.31	T.	2	21	4	6	
1902...	55.9	94	24	4.31	3.33	3.06	3.57	0.4	10	13	6	12	
1903...	54.3	96	11	2.52	3.35	3.50	3.12	T.	4	14	8	9	
1904...	54.2	93	20	2.05	1.64	1.10	1.60	T.	6	14	9	8	
1905...	50.1	88	10	4.24	2.78	1.72	2.91	4.0	8	12	8	11	
1906...	50.8	99	11	4.41	4.74	5.59	4.91	0.4	12	9	8	14	
1907...	44.0	84	6	1.52	1.02	1.39	1.31	3.1	6	12	10	9	
1908...	50.8	88	9	3.54	2.58	2.57	2.90	0.9	8	13	7	11	
1909...	51.0	88	5	4.78	3.92	4.68	4.46	0.1	10	12	9	10	
1910...	50.7	94	10	0.86	0.95	1.28	1.03	0.1	6	12	11	8	
1911...	55.0	99	6	4.06	2.25	2.39	2.90	T.	8	14	9	8	
1912...	54.2	90	16	4.17	4.59	4.42	4.39	0.7	11	10	10	11	
1913...	51.2	100	11	1.75	1.63	1.74	1.71	0.2	9	10	10	11	
1914...	55.2	95	16	1.83	2.56	1.98	2.12	1.0	8	16	8	7	
1915...	51.1	98	15	3.37	3.21	2.81	3.13	0.4	9	10	10	11	
1916...	51.0	95	7	2.95	1.70	1.64	2.10	0.3	8	11	11	9	
1917...	51.2	98	15	0.21	0.29	0.53	0.34	0.1	2	20	7	4	
1918...	51.7	99	6	2.58	2.40	1.83	2.27	0.5	9	10	11	10	
1919...	55.5	101	16	4.29	3.14	1.91	3.11	0.4	9	16	8	7	
1920...	53.9	89	20	2.40	1.34	1.54	1.76	0.1	7	13	10	8	
1921...	53.8	90	21	2.75	2.22	2.36	2.44	T.	9	13	10	8	
1922...	56.3	93	24	4.29	2.81	3.08	3.39	0.1	12	10	11	10	
1923...	54.1	100	13	2.56	1.57	1.17	1.77	0.2	6	15	10	6	
1924...	46.9	84	15	1.05	0.57	0.81	0.81	0.0	5	12	10	9	
1925...	53.6	111	10	1.94	1.17	1.22	1.44	T.	4	17	9	5	
1926...	58.5	105	10	2.07	2.09	2.45	2.20	0.0	7	13	11	7	
1927...	48.0	87	13	5.21	6.06	5.77	5.68	3.2	14	6	8	17	
1928...	58.2	107	16	1.02	1.23	1.00	1.08	0.0	5	18	7	6	
1929...	49.1	92	8	2.00	2.69	4.28	2.99	0.4	7	16	9	6	
1930...	50.8	98	18	3.76	2.40	1.69	2.62	0.7	9	12	8	11	
1931...	53.1	100	10	2.17	1.09	0.98	1.41	0.3	6	16	7	8	
1932...	55.9	98	25	2.66	2.02	1.76	2.15	2.2	6	13	9	9	
1933...	54.8	98	19	2.78	3.18	3.50	3.15	T.	3	9	10	12	
1934...	63.6	111	18	0.46	0.32	0.29	0.36	0.0	3	17	10	4	
1935...	49.5	89	20	2.11	2.93	2.79	2.61	1.5	12	6	11	14	
1936...	61.0	100	20	1.05	0.66	0.70	0.80	T.	4	19	9	3	
1937...	56.9	99	19	2.35	1.67	1.27	1.76	T.	7	12	11	8	
1938...	52.0	88	18	2.93	2.07	2.66	2.55	0.2	11	8	12	11	
1939...	60.1	104	18	1.33	1.60	1.71	1.55	0	8	13	11	7	
1940...	54.9	96	17	1.60	2.26	2.06	1.97	0.1	8	14	11	6	
1941...	58.3	98	21	2.23	3.12	3.48	2.94	T.	12	10	10	11	
1942...	50.0	87	19	3.87	2.94	2.27	3.03	0.5	11	9	9	13	
1943...	49.9	96	15	2.72	2.25	1.66	2.21	1.0	9	8	10	13	
1944...	58.2	95	11	3.33	2.64	2.22	2.73	0.1	11	11	12	8	
1945...	47.7	84	10	1.60	1.42	1.61	1.54	0.5	8	10	11	10	
Period	53.5	111	5	2.53	2.21	2.19	2.31	0.5	8	13	9	9	

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Climatological Data for May 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Carrington	Foster	1,579	48	44.3	-8.8	81	23	12	10	1.27	-1.22	0.60	1	0	7	16	5	10	sw.	Soo Line Agent.	
Casselton	Cass	934	50																	C. Hayford.	
Cavaler	Pembina	894	38	45.7		80	23	25	9	1.74	-0.52	0.30	24-25	T.	10	11	8	12	nw.	City Light & Power Co.	
Colgate	Steele	1,180	12							2.36	-0.34	1.00	31	0	6	12	12	7	w.	O. M. Jensen.	
Cooperstown	Griggs	1,428	49	48.0	-5.8	82	23	15	9	1.07	-1.46	0.39	1	T.	8	5	11	15	nw.	R. J. Lockner	
Courtenay	Stutsman	1,523	15							1.42	-1.01	0.67	1	0	7	14	9	8	e.	G. H. Hanawalt.	
Devils Lake	Ramsey	1,478	70	46.0	-6.6	77	23	20	9	2.79	+0.76	1.03	24	T.	11	5	10	16	n.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	45	49.0	-5.4	80	30	21	8	1.16	-1.40	0.44	19	T.	9	8	16	7	ne.	N. Dak. Agri. Exp. Sta.	
Edmore, 14 miles W.	Ramsey	1,524	22	43.0	-10.2	77	23	15	9	1.61	-0.25	0.63	25	0	9	19	5	7	n.	Mike Davis.	
Ellendale	Dickey	1,457	47	49.7	-5.6	80	30	23	8	1.88	-0.73	0.41	19	0	10	10	8	13	ne.	J. E. Demmer.	
Fargo Airport, 24 mi. NNW	Cass	895	65	48.4	-6.7	73	28	22	9	2.22	-0.67	0.99	31	0.4	10	5	14	12	n.	U. S. Weather Bureau.	
Forman	Sargent	1,249	54	49.6	-6.1	79	23	24	8	1.05	-1.90	0.58	31	0	5	18	6	7	n.	Helge Dyste.	
Fullerton	Dickey	1,439	48	50.1	-4.7	82	23	24	8	1.57	-1.42	0.63	19	0	11	8	14	9	ne.	F. O. Alin.	
Gackle	Logan	1,951	15																	Jack Dixon.	
Grafton	Walsh	827	54	47.6	-6.5	79	23	21	9	1.91	-0.11	0.39	31	T.	10	12	8	11	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	55	47.4	-6.8	80	23	20	9	1.32	-1.18	0.52	1	3.5	11	7	13	11	n.	University of N. Dak.	
Grand Forks Airt. 24 mi. W	Grand Forks	832	5	46.0		79	23	20	9	0.96	0.41	1-2	1.0	9	5	10	16	n.	U. S. Airway Comm. Sta.		
Hankinson	Richland	1,068	17	49.2	-8.8	82	23	23	9	0.98	-1.88	0.25	2	0	8	10	5	16	nw.	Soo Line Agent.	
Hannah	Cavaler	1,568	52	44.7	-6.9	76	24	20	9	1.57	-0.54	0.48	1	3.0	5	3	13	15	nw.	A. E. Prior.	
Hillsboro	Trall	901	40	48.2	-6.6	79	23	23	9	1.80	-1.15	0.96	1	6.0	11	10	12	9	n.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	54	49.2	-4.9	79	23	18	9	0.81	-1.96	0.22	1	0	7	6	14	11	ne.	N. Dak. State Hospital.	
Jamestown Airt. 2 mi. NE	Stutsman	1,494	5	47.3		78	23	17	9	0.66	0.22	1	T.	8	5	11	15	n.	U. S. Airway Comm. Sta.		
Kensal, 7 miles SW	Stutsman	1,440	5	46.9		77	23	16	9	1.85	0.45	19-20	0	10	7	10	14	ne.	U. S. Wildlife Refuge.		
Langdon, 14 miles SE	Cavaler	1,615	50	45.2	-6.6	77	23	17	9	2.37	+0.38	1.30	24-25	1.5	13	3	14	14	n.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	53	45.0	-8.4	77	23	20	9	0.96	-1.77	0.42	20	T.	5	15	8	8	.....	Chas. Ouradnik.
Lisbon	Ransom	1,091	42	48.8	-6.0	79	23	21	9	1.44	-1.33	0.82	19-20	0	7	14	1	16	nw.	J. O. Halverson.	
Mayville	Trall	975	50	48.1	-7.3	78	23	20	9	1.40	-1.32	0.69	1	2.0	12	3	21	7	n.	H. A. Ragaz.	
McHenry, 3 miles NE	Eddy	1,509	23	45.0	-7.7	77	23	15	9	2.01	-0.30	0.92	1-2	0.6	12	8	13	10	ne.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	34	50.6	-5.2	78	23	20	9	1.82	-1.19	0.73	19	T.	4	14	9	8	n.	J. G. Carlson.	
McVile	Nelson	1,467	4							1.73	0.60	1	4.0	9	2	23	6	nw.	A. M. Casad.		
Milnor	Sargent	1,117	13	48.8		84	23	24	9	2.78	-0.18	1.22	19	0	6	18	10	3	nw.	E. W. Wilson.	
Oakes	Dickey	1,318	17	48.8	-6.8	79	30	24	8	1.45	-1.26	0.47	19	0	8	11	3	17	nw.	F. H. Murray.	
Park River	Walsh	998	42	45.2	-8.4	80	23	16	9	1.48	-0.46	0.43	24-25	T.	9	15	3	13	n.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	803	72	44.4	-8.8	79	23	20	9	1.70	-0.49	0.56	1-2	0.2	13	4	15	12	n.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	15	44.8		78	23	16	9	1.37	-1.07	0.37	24	0	8	7	16	8	n.	T. C. Overland.	
Sharon	Steele	1,516	22	46.2	-7.9	79	23	19	9	1.23	-1.51	0.62	1	6.5	8	10	11	10	ne.	Nels O. Grefshelm.	
Valley City	Barnes	1,229	41	49.8	-4.8	80	23	19	9	1.77	-0.89	0.75	31	0	9	14	9	8	ne.	I. C. Robertson.	
Wahpeton	Richland	962	54	52.0	-4.3	80	24	25	9	2.00	-0.70	0.72	19	T.	10	13	6	12	nw.	W. J. Cavanaugh.	
Average for Eastern Division				57.3	-7.0	84	28	12	10	1.60	-0.93	1.25	24	0.8	8	10	10	11	n.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,014	50	48.2	-6.0	78	5	20	8	1.40	-1.00	0.57	24	T.	8	6	10	15	nw.	U. S. Airway Comm. Sta.	
Blasbe	Towner	1,601	43	47.9	-4.8	80	23	17	9	1.69	-0.46	0.50	25	0	9	11	9	11	nw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	71	50.4	-4.4	80	30	22	8	1.07	-1.16	0.37	17-18	T.	8	6	13	12	e.	U. S. Weather Bureau.	
Bismarck Airt. 24 mi. SE	Burleigh	1,650	6	49.6	-3.4	81	30	22	10	0.97	-1.35	0.32	17-18	0	8	6	13	12	n.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	54	44.6	-7.7	78	23	14	9	1.29	-0.76	0.34	18	0	8	9	10	12	nw.	N. D. School of Forestry	
Butte, 3 miles WSW	McLean	1,880	21	47.6	-7.2	80	24	15	9	1.77	-0.71	1.35	31	0	7	10	6	15	nw.	R. L. Williams.	
Carson, 24 miles SW	Grant	2,500	34	47.2	-7.3	78	24	14	8	1.75	-0.65	0.52	31	1.0	8	13	10	8	nw.	J. W. Evans.	
Center	Oliver	2,100	8	47.2		80	23	10	10	0.95	0.33	19	T.	5	10	14	7	nw.	Fred L. Heinz.		
Drake	McHenry	1,634	16	47.6	-7.1	80	23	21	8	1.23	-0.85	0.29	25	0	11	19	2	10	se.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	50	45.6	-7.2	78	24	16	10	1.24	-0.63	0.38	25	T.	10	8	12	11	nw.	State Tuberculosis San.	
Eckman	Bottineau	1,600	40	46.7	-5.9	82	24	15	9	1.59	-0.39	0.71	18	0	8	6	17	8	nw.	E. R. Sherman.	
Fessenden	Wells	1,810	34	47.4	-5.9	80	23	17	9	0.92	-1.36	0.29	31	T.	6	14	9	8	n.	John V. Zuber.	
Fort Yates	Sioux	1,670	46	51.0	-5.7	83	30	20	8	0.90	-1.26	0.27	18	0	4	16	7	8	se.	P. J. Jacobson.	
Foxholm, 64 miles NE	Ward	1,657	25	45.8	-6.4	79	24	16	9	1.22	-0.81	0.65	17-18	0	11	15	8	8	n.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	69	47.2	-6.4	81	24	16	8	1.44	-0.89	1.02	31	0	7	8	8	15	nw.	Mac H. Vorachek.	
Granville	McHenry	1,504	39	47.6	-5.3	81	23	16	9	1.54	-0.49	0.50	18	T.	8	19	7	5	nw.	Fred Roble.	
Hansboro	Towner	1,597	38	44.0	-7.5	80	24	20	9	1.64	-0.46	0.82	24-25	T.	10	10	10	11	nw.	W. E. Disher.	
Harvey	Wells	1,596	43																	Orville Hoksche.	
Leeds	Benson	1,515	5	46.4		79	23	17	9	1.74	0.45	2	0	10	7	17	7	7	w.	John Dulmage.	
Linton	Emmons	1,711	29	52.1	-3.6	83	30	19	8	1.45	-0.84	0.34	31	0	8	8	10	13	nw.	Wm. Heyerman.	
Maddock, 1 mile E	Benson	1,604	31	47.2	-6.6	80	23	17	9	2.56	+0.51	0.64	1	0	11	5	15	11	nw.	A. T. Pelland.	
Mandan, 14 miles SW	Morton	1,750	32	50.0	-5.1	80	23	19	8	1.55	-0.71	0.51	24	0	8	7	6	18	n.	No. Gr. Plains Field Sta.	
Max	McLean	2,093	17	46.5	-7.6	80	24	18	8	2.28	+0.08	1.78	30-31	0	7	14	5	12	se.	Soo Line Agent.	
McClusky	Sheridan	1,943	28	47.5	-6.5	80	23	18	9	2.15											

Climatological Data for May 1945—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Epping	Williams	2,224	37	49.0	−6.0	83	30	11	8	1.15	−0.99	0.91	31	0	2	14	12	5	nw.	T. Beachler.	
Fairfield, 9½ miles N.	Billings	2,650	17							1.65	−0.71	0.75	26-27†	T.	4	11	10	10	se.	Mrs. Edith Larson.	
Fryburg, 2 miles N.	Billings	2,790	28	47.4		80	23†	14	8	1.77	−0.58	1.02	26-27	2.2	7	3	16	12	nw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,781	5	47.2	−5.8	80	24	13	8	2.14	−0.12	1.56	26-27	2.0	7	6	11	14	nw.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	37	49.8	−1.4	83	30	13	8	0.63	−1.59	0.52	31	0	2	16	10	5	n.	L. D. Nielson.	
Halliday	Dunn	2,073	4							4.40		3.40	31	T.	3	6	17	8	nw.	John Kisse.	
Hettinger	Adams	2,675	39	49.8	−4.7	82	30	14	8	1.62	−0.66	0.45	13	3.0	9					A. W. Anderson.	
Kenmare	Ward	1,799	14	47.2	−6.7	81	24	15	9	1.27	−0.71	0.48	18	0	7	9	5	17	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	37	50.8	−2.8	82	24	15	8	2.11	−0.18	0.78	27	0	8	7	12	12	nw.	S. P. Grane.	
Madora	Billings	2,271	31	51.3		81	23	19	8	2.59	+0.41	1.63	25-26	3.0	6	14	11	6	w.	Harry Roberts.	
Mott	Hettinger	2,424	39	49.4	−5.2	80	30	12	8	3.02	+0.76	1.57	31	0.5	10	2	17	12	nw.	Oscar W. Wick.	
New England	Hettinger	2,621	54	50.1	−3.1	80	23†	15	8	1.90	−0.27	0.56	26-27	2.5	11	9	13	9	nw.	F. S. Sleight.	
New Hradec, 1 mile E.	Dunn		4	48.8		82	24	16	8	0.94		0.55	31	0.5	5	17	6	8	nw.	Peter F. Fieck.	
Parshall	Mountrail	1,929	31	47.1	−6.9	80	24†	14	8	2.27	+0.10	1.60	31	T.	6	5	25	1	nw.	C. E. Shubert.	
Portal	Burke	1,954	32	46.0	−6.1	81	24	15	8†	0.92	−1.15	0.62	18-19	0	4	9	11	11	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	41	47.0	−6.5	79	24	14	8†	2.04	−0.11	1.06	31	T.	5	9	11	11	se.	E. J. Lewis.	
Richardton, 1½ miles N.	Stark	2,467	30	49.5	−4.4	78	30	15	7	0.99	−1.47	0.30	31	T.	8	6	7	18	se.	Assumption Abbey.	
Ryder	Ward	2,108	17							1.56	−0.53	1.13	31	T.	4	5	8	18	nw.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	20	45.0	−10.2	83	30	17	9	0.61	−1.34	0.30	31	0	3	8	19	4		H. J. Bugge.	
Stanley	Mountrail	2,258	8	44.3		80	24	12	9	1.88		1.13	31	0	5	6	18	7	nw.	Leroy Edwards.	
Tagus	Mountrail	2,179	17			80				1.81	−0.18	0.84	31	T.	7	10	13	8	ne.	Geo. N. Pilgard.	
Toga	Williams	2,279	17							2.15	+0.09	1.50	31	T.	7	5	14	12	nw.	Morris J. Pederson.	
Trotters	Golden Valley		20							0.95	−1.28	0.50	31	T.	5	2	24	5	se.	Walter Grunewald.	
Van Hook	Mountrail	1,864	5							1.36		0.70	31	T.	2	5	18	8	nw.	H. Glenn Sims.	
Watford City	McKenzie	2,084	33	49.1	−5.4	83	30	12	8	0.82	−1.17	0.48	31	0	5	6	22	3	se.	J. C. Zeller.	
Wildrose	Williams	2,258	16							1.08	−0.82	0.56	31	0	5	22	6	3	n.	Jonathan Winkjer.	
Williston	Williams	1,878	67	48.6	−5.4	82	30	15	8	0.99	−1.07	0.79	31	T.	5	7	7	17	nw.	U. S. Weather Bureau.	
Average for Western Division					48.2	−5.5	83	30	11	8	1.61	−0.58	3.40	31	0.6	8	9	12	10	nw.	
Average for the State					47.7	−5.8	84	23†	10	10	1.54	−0.77	3.40	31	0.5	8	10	11	10	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for May 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum	69	47	56	62	78	76	45	45	47	58	65	60	44	48	58	61	62	60	59	50	60	68	76	72	77	61	61	70	64	78	69	61.5
	Minimum	36	31	26	28	37	37	27	20	26	26	27	26	27	30	33	27	31	44	46	36	35	36	42	54	41	38	46	44	37	46	44	35.0
Bismarck Airport	Maximum	69	46	58	68	73	72	43	44	51	58	58	65	46	48	59	63	64	62	57	56	63	71	80	80	66	65	58	73	69	81	71	62.5
	Minimum	39	36	29	29	41	40	28	22	25	22	36	31	27	32	38	34	35	46	48	40	34	35	46	55	43	38	48	36	36	46	47	36.8
Bottineau	Maximum	59	49	58	66	71	51	37	41	47	57	53	44	44	52	61	62	61	52	58	57	64	70	78	78	44	59	52	59	69	61	59	57.2
	Minimum	25	28	25	33	40	39	25	19	14	17	37	31	17	23	23	34	38	41	39	38	30	34	45	52	33	28	42	38	24	42	45	32.1
Carson	Maximum	68	55	47	69	72	65	52	39	49	56	56	49	47	50	50	57	56	54	57	55	54	70	70	78	78	55	54	54	62	75	75	58.8
	Minimum	38	31	20	31	37	40	30	14	32	23	42	31	30	29	29	38	34	48	38	40	29	34	40	50	46	38	47	34	37	42	51	35.6
Crosby	Maximum	60	54	65	74	71	49	36	43	52	60	56	54	49	53	59	63	63	55	52	59	64	71	79	81	56	70	64	64	75	81	52	60.8
	Minimum	36	34	24	35	43	39	24	15	14	23	36	36	20	20	20	32	40	43	39	39	35	41	42	44	35	31	39	38	26	42	41	38.1
Devils Lake	Maximum	45	51	54	62	72	68	37	39	44	58	54	46	40	54	58	62	63	52	56	49	61	68	77	76	54	54	55	67	65	62	52	56.6
	Minimum	34	34	29	34	41	37	28	23	20	28	39	31	22	25	31	32	32	45	47	41	34	39	47	53	36	32	40	38	31	47	43	35.3
Dickinson Airport	Maximum	65	49	60	71	71	62	41	44	50	60	52	64	43	37	53	63	59	68	62	52	63	70	79	78	69	66	55	67	68	80	68	60.9
	Minimum	36	30	24	30	39	32	20	17	29	25	32	34	29	28	32	42	38	41	42	38	34	34	39	43	43	38	42	36	37	45	51	34.7
Dunn Center	Maximum	64	47	61	70	70	62	38	43	51	61	53	59	46	48	56	65	61	63	57	55	63	69	78	80	58	66	58	67	69	81	70	60.8
	Minimum	32	33	17	25	35	36	26	15	19	18	29	28	24	30	31	34	30	39	38	41	33	33	34	44	43	37	38	33	38	44	39	31.9
Fargo Airport	Maximum	42	53	54	61	73	72	47	44	50	60	72	59	44	57	60	63	65	56	59	55	61	67	78	70	67	59	59	73	64	68	58	60.6
	Minimum	32	34	32	31	38	39	30	28	22	23	35	28	28	30	30	30	32	46	50	45	41	35	36	55	43	41	37	40	36	50	44	26.2
Fessenden	Maximum	55	50	56	68	73	69	48	44	48	58	55	48	45	53	64	63	65	59	52	51	64	68	80	76	70	59	59	71	67	72	66	60.5
	Minimum	36	32	31	29	41	38	29	23	17	25	42	31	24	23	25	30	29	44	44	41	31	38	48	49	39	30	40	36	26	48	45	34.3
Fullerton	Maximum	57	53	56	62	77	77	52	45	50	59	68	57	45	55	60	63	64	60	60	54	60	67	82	73	70	65	62	71	65	80	66	62.4
	Minimum	39	36	30	30	31	39	33	24	27	26	42	29	25	32	36	30	34	43	46	45	41	38	44	55	53	40	44	49	37	46	49	37.8
Garrison	Maximum	66	47	60	69	75	64	40	44	51	57	55	52	48	49	59	62	64	59	59	58	64	69	80	81	56	67	56	72	69	81	66	61.3
	Minimum	35	31	21	29	36	38	23	16	20	20	35	30	24	29	30	33	34	43	43	37	32	38	41	50	40	33	37	31	27	44	47	33.1
Golva	Maximum	65	53	61	74	70	58	40	44	52	64	55	65	42	34	51	63	58	69	56	52	63	70	76	80	69	69	59	65	68	78	66	60.9
	Minimum	36	25	22	28	33	30	20	13	30	25	31	36	27	26	30	40	39	38	41	39	33	31	31	51	43	40	40	38	39	44	49	33.6
Grafton	Maximum	55	54	55	68	75	70	54	40	43	58	55	45	44	56	61	63	64	62	59	58	63	69	79	77	74	47	60	69	63	65	61	60.0
	Minimum	33	33	31	30	32	38	31	28	21	27	42	30	27	26	32	31	31	44	45	43	41	39	40	52	38	33	33	35	32	47	43	35.1
Grand Forks Airport	Maximum	42	56	54	62	73	68	46	42	44	59	58	52	44	59	60	63	66	54	59	52	62	67	79	73	78	58	51	61	72	65	63	58.7
	Minimum	32	33	31	28	34	37	28	26	20	27	31	29	25	24	27	26	35	45	45	40	37	32	37	51	38	34	31	35	31	43	41	33.3
Jamestown Airport	Maximum	50	51	57	63	76	73	47	45	49	60	64	50	46	53	63	63	63	56	61	50	61	66	78	75	66	63	59	73	66	73	61	60.7
	Minimum	35	33	29	28	31	37	27	23	17	19	30	24	23	26	30	28	30	45	45	42	36	38	45	54	39	34	40	41	31	51	44	38.9
Kenmare/	Maximum	62	49	62	70	76	56	38	43	51	56	55	49	46	50	62	64	63	55	55	59	65	70	78	81	44	65	57	65	72	72	52	59.5
	Minimum	39	34	24	36	45	41	27	19	15	24	36	35	22	23	25	32	32	44	40	42	35	42	49	53	37	35	37	42	32	44	42	35.0
Langdon	Maximum	47	57	57	62	70	63	45	40	44	62	56	48	47	58	64	62	56	58	54	68	70	77	74	65	59	60	62	63	63	57	51.0	
	Minimum	30	31	29	31	36	33	28	21	17	22	37	30	20	21	26	26	32	42	42	35	30	38	52	34	30	37	35	25	38	37	31.5	
Marmarth	Maximum	72	68	60	73	72	61	45	47	52	67	65	70	57	34	50	64	60	71	65	51	63	72	77	82	75	70	67	69	72	76	80	64.7
	Minimum	46	32	20	42	34	38	26	15	33	25	42	41	28	27	30	42	50	42	45	41	35	29	35	48	48	44	47	35	38	42	48	37.0
Minot Airport	Maximum	63	46	59	69	71	62	37	40	46	55	52	46	49	50	59	24	62	55	55	57	61	68	82	80	56	59	59	68	70	72	52	58.8
	Minimum	37	32	27	33	45	35	28	22	20	27	35	32	24	28	30	33	32	43	43	41	35	42	50	53	35	35	42	36	32	48	42	35.4
Mott	Maximum	66	57	60	70	71	65	50	46	52	60	59	67	54	41	53	63	58	70	67	53	61	70	79	78	72	65	52	68	69	80	77	63.3
	Minimum	38	31	20	32	35	38	23	12	34	23	44	29	30	27	31	40	34	44	45	41	33	32	36	44	46	40	49	35	42	44	52	35.6
Pembina Airport	Maximum	40	51	52	63	74	51	38	36	41	55	45	40	43	53	56	61	64	56	59	41	62	65	79	75	48	49	60	58	65	61	58	55.1
	Minimum	32	33	31	35	35	34	28	25	20	29	33	28	24	25	30	28	35	43	45	50	38	33	39	48	37	31	36	34	30	42	43	33.7
Sharon	Maximum	49	52	55	61	78	70	47	41	49	60	62	48	41	53	60	64	65	57	56	51	61	64	79	73	67	55	60	70	63	65	57	59.0
	Minimum	32	31	30	31	36	35	30	24	19	21	40	21	22	24	33	34	32	44	44	41	39	34	36	41	39	32	34	37	31	47	42	33.4
Steele	Maximum	71	51	56	66	75	77	50	45	49	60	60	45	48	60	62	64	59	58	52	60	67	79	76	72	63	62	73	65	79	67	62.3	
	Minimum	36	32	28	26	37	37	29	18	19	21	40	26	19	25	34	25	29	43	47	42	33	33	44	54	47	34	42	34	30	42	49	34.0
Valley City	Maximum	55	54	55	62	75	75	54	44	49	62	60	53	44	53	60	62	63	63	65	61	61	65	80	77	70	60	60	73	73	70	62.3	
	Minimum	32	34	31	30	35	39	34	24	19	25	42	30	26	32	34	34	38	45	47	44	42	39	41	54	50	38	40	46	37	49	45	37.3
Wahpeton	Maximum	54	57	57	62	75	79	71	47	52	59	77	72	52																			

Daily Precipitation for May 1945

Stations	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
<i>Eastern Division</i>																																	
Carrington ²	James	.60	.16																	.14	.19				.01	.04				.13	T.		1.27
Casselton	Red.																																
Cooperstown	Sheyenne	.39	.08					T.					T.	T.						.04	T.	.15				.05		.18		.07		.11	1.07
Courtenay	James	.67	T.																	.12	.10	.06						.15		.20		.12	1.42
Devils Lake ^{1 5}	Devils Lake	.72	T.				.01	T.	T.			.12	.01							.17	.25				1.03	.33		.07	.04		.04	2.79	
Edgeley	James	.20	.06				T.	T.					.03							.21	.44	.05			.04			T.	.06		.07	1.16	
Edmore	Devils Lake	.10					.01	T.				.26	.06							.11		.30			T.	.63		.09	T.		.05	1.61	
Ellendale	James	.17					.04						.04							.36	.41				.15	.21		.05	.16		.29	1.88	
Fargo ^{1 5}	Red.	.37	.09				.13	T.	T.			T.	.13							.06	.27	T.			.04	T.		.12	.02	T.		.99	2.22
Forman	Sheyenne												.06							.31	.03							.07			.58	1.05	
Fullerton	James	.19	.07				.06		T.		T.		.08							.26	.63	.03			.04	.02		.05	T.		.14	1.57	
Gackle	do																																
Grafton	Red.	.22	.03					.05				.10	.05							.02	T.	.31				.38	.36		T.		.39	1.91	
Grand Forks Airport ³	do	.39	.02				T.	T.				.13	.02							.02	.20	T.				.09		T.	.02		.07	0.96	
Hankinson ²	do	T.	.25	.02										T.						.07	.19			.07		.02			.12		.24	0.98	
Hannah	Pembina	.48						.30				.24	T.												T.	.45	.10					T.	1.57
Hillsboro	Red.	.96	.03				.07	T.	T.			.04	.06							.05	.01	.07			.15	T.		.03			.33	1.80	
Jamestown Airport ³	James	.22	T.				T.	T.				.01								.07	.17			.04				.03	T.		.02	0.66	
Langdon	Pembina	.38					.08					.21	.05							.07	.05	.05			.09	1.25	.05	.03		.04	T.	.07	2.37
Larimore	Red.	.14										.11								.18	.42											.09	0.96
Lisbon	Sheyenne	.12	.21										.02								.07	.82			.01							.19	1.44
Mayville	Red.	.67	.02				.10	T.				.10	T.							.03	.03	.04			.03	.03	T.	.04		.02	.29	1.40	
McHenry	James	.74	.18									.04	.05							.07	.16	.10			.05	.52		.05		.02	.03	2.01	
McLeod	Sheyenne	.40						T.					.05							T.	.73	T.			T.			.13			.56	1.82	
Oakes ²	James	.16	.06					.03						.05						.27	.47					.05				T.	.36	1.45	
Park River	Red.	.11					T.	T.				.10	.02							.06	.37	T.			.31	.43			.01		.07	1.48	
Pembina Airport ³	do	.52	.04				.01	.12	.03			.25	.02							.02	.17	T.		T.	.15	.21			.09		T.	.07	1.70
Petersburg	do	.30							T.			.09								.05	.18	.12			.37	.18		T.	T.	T.	.08	1.37	
Sharon	do	.62					T.	T.				.04	.05							.02	.14	.05			T.	.13		T.	T.		.18	1.23	
Valley City	Sheyenne	.32	.19				.05					.14								.01	.13	.14				.04				T.	.75	1.77	
Wahpeton	Red.	.18	.07	T.				T.				.02	.05							.02	.70	.02			.17			.06			.71	2.00	
<i>Middle Division</i>																																	
Ashley ³	Missouri	.01	.03				T.			T.			.14							T.	.18	.18	T.			.57			.01	T.		.78	1.40
Bisbee	Devils Lake	.08	.29				T.	.10		T.		.20								.12	.13				.05	.50		.22				.11	0.69
Bismarck Airport ^{1 5}	Missouri	T.	T.			T.	T.						.04							.30	.08		T.	T.	.05	.26	T.		.10		T.	.11	1.97
Bottineau ²	Mouse	.12					.17					.21	T.	T.						.23	.34	T.		.07		.04		.27	.07			.12	1.29
Butte	do	T.	T.				T.					.01	.04							.23	T.		.03	T.		T.	.09		.02	T.		.13	1.77
Carson	Heart	T.																		.09					.10	.15		.22			.52	1.75	
Center	Missouri											T.	T.	T.	.12		.04	.51	T.	.22	.33	.03	T.			.11	.29	.02	T.	.03	.25	0.95	
Drake ²	Mouse	.17	.05									.23	.02	.05						.24	.02	.05				.11	.29	.02	T.	.03	.14	1.24	
Dunseith	do	.05	.06				.15	T.				.10								.71	.02				.13	.46		.07	T.		.03	1.24	
Eckman	do	.02					.06					.10								.23	.10	.21			T.		.04				.29	0.92	
Fessenden	James	.05						T.												.27	.25				T.			.04			.27	0.90	
Fort Yates	Missouri						.03	T.				.09	.01							.02	.63			.02		.11	.24	.03			.12	1.22	
Foxholm	Mouse	.03	.01				.02					.50	.03							.27					.04		.04	.28	.02			.40	1.44
Garrison ³	Missouri	.20	.06				.09	T.				.04	T.							.50					.49	.33		.07	T.		.70	1.64	
Granville	Devils Lake	.17	.08									.23	T.							.10	.01	T.			.49	.33		.07	T.		.40	1.54	
Hansboro	Missouri	.10										.15								.30	.23	T.			.26	.18	.33		.09		.34	1.45	
Linton	Sheyenne	.64	.14									.06	T.							.26	.18	.33		.09	.44	.28		.09		.05	.25	1.56	
Maddock	Missouri	.24	T.					T.				T.	T.	T.						.44	.06	.08			.51		.03	.02			.10	1.55	
Mandan ²	do	.02	T.				.02					T.	.03							.12	.29	.26			.04		.03				.17	2.28	
Max ²	do	.07										.08								.59	T.		.07	T.	T.	.06	.16	T.	.02			.85	1.79
McClusky	Mouse	T.	T.				.02	T.		T.		T.	.02							.70			.02		.11	.66		.09			.14	1.92	
Mohall	do						.07	T.				.11	.02							.21	.13	.03			.40	.07		.05			.03	1.12	
Napoleon ²	Missouri	.05	.03									.12								.38	.08			.13	.06		.13				.15	1.26	
New Salem	Heart	.33										.21	.03							.11	.39	.02			.05	.10		.13			.06	0.91	
Pettibone	James	.05	.37				.12	.03				.21	.03							.16	.02	T.			.05	.40		.11	.01		.10	1.68	
Rolla	Devils Lake	.02	T.				T.	T.				.16	T.							.26	T.	.04			.30	.30		.10	T.		T.	1.18	
Rugby	Mouse	.04	.01					.05		.10		.20	.60	T.						.35	.25			.22	.10	.30		.10			.20	2.32	
Selfridge	Missouri											.35								.15					T.						T.	0.90	
Steele	do											.35								.15					T.						T.	0.70	
Towner	Missouri					.05						T.								.16	.22	.06			.79		.05			T.	.11	2.46	
Turtle Lake	do					.01						T.	.01							.14	.09			T.	.24						.01	0.50	
Tuttle	do											T.								.20	.06			T.							.40	0.66	
Underwood	do											.12	T.							.42	.12		.03	.01	.13	.18		.04	T.		.97	3.02	
Velva	Missouri	.16										.08								.08	.27				T.		.16				.08	0.75	
Washburn	Mouse	.10	T.		</																												

1.05
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4-6

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIV BISMARCK, N. D., JUNE 1945 No. 6

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GENERAL SUMMARY

The month was cool and dry. June 1915, with a mean temperature of 56.7°, was the only cooler June of record. The western part of the state reported the lowest temperatures with the average for the section 6.2° below normal. Sixteen stations in the state reported below freezing readings on the 2d, 3d, or 4th of the month. Precipitation was below normal at all but 17 stations. No rain fell in the eastern section from the 20th to 25th. Due to the cool weather, crops were late but had a good stand. Pastures were good and livestock gained flesh. Considerable scattered hail damage occurred, especially in Williams and Morton counties.

TEMPERATURE

The mean temperature for the state was 57.5°, or 5.3° below the 1892-1945 average for June. The mean temperature for the eastern division was 58.7°; for the middle division, 57.4°; and for the western division, 56.5°. The highest mean temperature was 61.6° at Grand Forks, and the lowest, 54.3° at Golvva, making a range in mean temperature of 7.3°. The absolute range was 71°, from 99° at Crosby, Epping, and Williston on the 22d, to 28° at Edmore on the 3d. The average daily excess in temperature for the state since January 1, 1945, is 1.0°.

PRECIPITATION

The average precipitation for the state was 2.48 inches, or 1.02 inches less than the 1892-1945 average for June. In the eastern division the average amount was 2.26 inches; in the middle division, 2.41 inches; and in the western division, 2.77 inches. The greatest monthly amount reported was 4.76 inches at Sanish; the least, 0.76 inch at Fargo. The greatest amount recorded in any 24 consecutive hours was 2.50 inches at Rolla on the 27-28th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 1.74 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.19	24	29.36	26	11.3	36	w.	26	83	84	56	56	51	249
Devils Lake....	30.26	5	29.32	27	7.7	26	ne.	1	82	85	57	59	47	252
Fargo.....	30.24	6	29.35	27	11.3	30	se.	26	80	86	54	55	53	187
Williston.....	30.21	24	29.26	26	7.8	42	w.	23	78	82	54	53	49	263

† And other dates.

CHANGE IN OBSERVERS

Mr. A. T. Felland, Cooperative Observer at Maddock, N. D. for the past 26 years moved to Walla Walla, Wash. Mr. Felland was principal of the Benson County Agricultural School and has taught school for 40 years. His weather records were accurate and complete and are valuable to his community and to the Government. His successor as principal and weather reporter is Mr. Thomas Tait.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs.....	13	6	1	3	2	4	11	12	24	13	2	1	2	2	1	1	1	1	1	3	1	1	1	1	1	1	2	7	1	3	1
Lunar halos..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hail.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thundrstm..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	60.5	94	28	3.59	4.44	2.03	3.35	0	8	11	9	10
1893...	67.4	103	33	3.25	4.28	2.60	3.38	0	9	13	10	7
1894...	68.8	103	25	4.08	2.31	3.93	3.44	0	7	17	6	7
1895...	59.7	97	29	5.37	4.54	4.11	4.67	0	12	8	13	9
1896...	65.6	97	37	3.06	4.33	4.68	4.02	0	9	16	9	5
1897...	61.7	109	20	4.40	4.40	2.45	3.75	0	9	11	10	9
1898...	62.6	105	26	3.17	3.21	3.18	3.19	0	9	10	10	10
1899...	62.2	105	30	3.20	4.25	3.98	3.81	0	10	12	11	7
1900...	66.9	109	27	1.59	1.54	1.04	1.39	0	5	15	11	4
1901...	61.6	95	22	7.20	5.31	5.90	6.14	0	15	10	11	9
1902...	58.0	97	28	3.67	3.75	3.53	3.65	0	11	12	9	9
1903...	62.4	96	27	1.02	1.52	1.78	1.44	0	4	17	8	5
1904...	61.4	100	30	5.95	5.92	4.82	5.56	0	11	13	8	9
1905...	59.7	97	32	4.49	4.64	3.87	4.33	0	12	10	7	13
1906...	62.0	95	32	3.80	4.21	6.34	4.78	0	11	13	8	9
1907...	61.9	95	25	3.47	2.53	2.80	2.93	0	10	12	10	8
1908...	60.4	93	27	2.91	3.63	3.70	3.41	0	10	12	9	9
1909...	62.9	98	28	3.94	2.49	3.92	3.45	0	10	12	11	7
1910...	67.3	111	19	1.26	1.85	3.00	2.04	0	6	16	9	5
1911...	66.9	108	25	3.13	3.42	2.61	3.05	0	9	13	10	7
1912...	61.8	104	28	2.27	2.11	1.65	2.01	0	6	16	8	6
1913...	65.8	101	27	2.85	1.98	2.52	2.45	0	8	16	9	5
1914...	62.2	93	29	5.67	7.13	6.64	6.48	0	13	9	11	10
1915...	56.7	94	20	5.59	5.11	3.73	4.81	0	12	9	12	9
1916...	58.0	92	29	4.06	3.51	4.05	3.87	0	11	10	11	9
1917...	59.7	103	19	2.38	1.88	1.96	2.07	0	8	13	11	6
1918...	63.3	102	27	2.23	1.53	0.97	1.58	0	7	14	11	5
1919...	67.2	108	22	3.15	1.99	1.50	2.21	0	5	15	10	5
1920...	62.2	98	26	3.64	3.74	3.20	3.53	0	11	12	12	6
1921...	68.2	108	30	3.28	2.83	4.74	3.62	0	9	14	10	6
1922...	63.5	108	30	3.38	3.55	4.44	3.79	0	9	15	8	7
1923...	66.1	100	30	4.79	2.83	4.21	3.94	0	8	13	12	5
1924...	58.6	89	26	3.45	4.51	4.17	4.04	0	11	10	12	8
1925...	61.5	98	30	7.72	5.43	4.84	6.00	0	14	11	10	9
1926...	60.7	104	22	2.66	2.47	2.71	2.61	0	9	13	9	8
1927...	61.2	99	22	3.81	2.34	2.30	2.82	0	9	11	13	6
1928...	58.2	92	24	4.83	5.30	4.53	4.89	0	12	10	10	10
1929...	61.4	98	21	1.10	1.10	2.12	1.44	0	7	16	9	5
1930...	63.3	96	30	2.31	3.42	3.53	3.09	0	10	13	11	6
1931...	68.4	110	27	2.93	2.05	2.07	2.35	0	8	14	10	6
1932...	67.0	98	34	3.33	3.61	4.83	3.92	0	10	14	10	6
1933...	70.7	110	33	1.99	1.66	1.67	1.77	0	7	18	10	2
1934...	64.3	100	29	3.74	2.85	2.54	3.04	0	11	12	10	8
1935...	60.3	99	25	3.65	2.70	2.77	3.04	T.	10	11	12	7
1936...	66.4	110	28	1.41	1.40	1.20	1.34	0	6	16	10	4
1937...	63.5	109	25	3.04	5.62	3.43	4.03	T.	7	15	9	6
1938...	64.2	99	27	1.82	2.87	3.49	2.73	0	9	11	11	8
1939...	60.1	99	29	5.44	4.67	3.67	4.59	0	12	10	11	9
1940...	63.1	102	27	2.02	2.10	2.60	2.24	0	9	13	11	6
1941...	64.2	97	32	5.86	4.91	5.85	5.54	0	12	12	9	9
1942...	60.1	90	27	2.81	2.81	3.75	3.12	0	11	9	12	9
1943...	60.4	102	28	4.61	5.07	5.54	5.07	1.3	13	8	11	11
1944...	61.7	93	30	4.25	7.10	7.94	6.43	T.	13	10	9	11
1945...	57.5	99	28	2.26	2.41	2.77	2.48	0	11	8	12	10
Period	62.8	111	19	3.54	3.47	3.49	3.50	T.	9	13	10	7

Climatological Data for June 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Carrington	Foster	1,579	48	55.8	-7.6	94	22	33	27	2.12	-1.33	0.66	1	0	11	15	7	8	sw.	Soo Line Agent.
Casselton	Cass	934	50																	C. Hayford.
Cavalier	Pembina	894	38	59.4		93	22	34	3	1.77	-1.31	0.55	1	0	8	12	7	11	s.	City Light & Power Co.
Colgate	Steele	1,180	12							0.86	-2.62	0.35	8	0	6	15	12	3	nw.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	59.2	-4.0	93	21	30	3	2.05	-1.22	0.62	17	0	8	5	11	14	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	15							1.57	-1.63	0.51	1	0	11	17	9	4	e.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	57.6	-4.3	92	21	35	2	2.54	-1.02	1.41	11-12	0	14	5	11	14	s.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	45	57.8	-5.8	90	22	30	4	2.03	-1.64	0.70	1	0	11	8	14	8	s.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,524	22	55.0	-7.3	90	22	28	3	3.43	+0.32	1.76	26	0	8	16	7	7	se.	Mike Davis.
Ellendale	Dickey	1,457	47	53.8	-6.0	89	22	35	27	2.39	-1.02	0.44	27	0	11	8	11	11	nw.	J. E. Demmer.
Fargo Airport, 24 mi. NNW	Cass	895	65	60.3	-4.1	92	22	35	3	0.76	-3.29	0.38	26	0	9	6	12	12	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	54	60.4	-4.6	90	22	35	2	2.64	-0.96	1.00	1	0	8	13	10	7	s.	Helge Dyste.
Fullerton	Dickey	1,439	48	59.3	-4.9	90	22	35	4	2.28	-1.63	0.61	1	0	10	8	14	8	w.	F. O. Alin.
Gackle	Logan	1,951	15																	Mrs. Walter Kranzler.
Grafton	Walsh	827	54	60.2	-3.5	92	22	34	3	2.30	-0.95	0.98	27-28	0	10	10	10	10	nw.	Dr. J. C. Lamont.
Graud Forks, 2 miles W.	Grand Forks	880	55	61.6	-1.8	90	22	40	37	4.61	+1.33	2.34	1-2	0	12	8	12	10	n.	University of N. Dak.
Grand Forks Airt. 24 mi. W	Grand Forks	832	5	58.6		93	22	32	3	3.71		1.60	1	0	16	7	9	14	s.	U. S. Airway Comm. Sta.
Haukinson	Richland	1,068	17	60.6	-6.3	92	22	35	27	3.97	+0.39	2.17	1	0	14	9	12	9	w.	Soo Line Agent.
Hannah	Cavalier	1,568	52	56.0	-4.5	91	22	34	4	3.09	-0.32	0.85	28	0	9	4	13	13	sw.	A. E. Prior.
Hillsboro	Trall	901	40	60.2	-4.5	92	22	35	3	1.18	-2.24	0.38	1	0	7	11	11	8	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	54	59.3	-4.4	93	22	33	4	1.70	-1.80	0.65	1	0	11	6	13	11	sw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	5	57.4		90	22	34	3	1.57		0.54	1	0	10	4	14	12	sw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	56.0		89	21	29	4	1.63		0.54	1	0	7	7	16	7	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	50	57.6	-3.0	93	22	32	3	1.69	-1.55	0.41	28	0	13	6	18	6	w.	V. Sturlaugson.
Larimore	Grand Forks	1,134	53	58.6	-4.3	92	23	31	3	2.57	-0.99	1.02	1	0	11	16	2	12	se.	Chas. Ouradnik.
Lisbon	Ransom	1,091	42	59.4	-5.0	92	22	33	4	1.75	-2.15	0.47	1	0	11	14	4	12	sw.	J. O. Halverson.
Mayville	Trall	975	50	60.2	-4.3	92	22	33	3	2.36	-1.01	1.12	12	0	13	5	16	9	w.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	23	56.4	-5.4	91	22	28	3	1.83	-1.64	0.48	11	0	13	5	15	10	se.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	34	60.4	-4.9	91	22	35	47	2.07	-1.76	0.65	1	0	11	21	2	7	sw.	J. G. Carlson.
McVille	Nelson	1,467	4							2.28		0.78	11	0	7	6	18	6	sw.	A. M. Casad.
Milnor	Sargent	1,117	13	60.6		90	22	34	4	3.11	-0.71	1.79	1	0	6	10	19	1	se.	E. W. Wilson.
Oakes	Dickey	1,318	17	58.5	-6.8	88	22	34	4	2.29	-1.35	0.64	13	0	12	14	6	10	n.	F. H. Murray.
Park River	Walsh	998	42	58.1	-5.0	93	22	30	3	2.33	-0.93	0.90	26	0	8	14	10	6	nw.	Martin Severson.
Pembina Airt. 1 mile S.	Pembina	803	72	58.6	-4.2	93	22	33	3	2.23	-0.96	0.76	28-29	0	13	7	17	6	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	15	57.0		91	22	33	3	2.85	-0.65	1.09	11	0	10	11	8	11	w.	T. C. Overland.
Sharon	Steele	1,516	22	58.5	-4.5	90	22	34	27	1.65	-1.96	0.69	1	0	11	5	14	11	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,229	41	59.6	-4.5	90	22	33	4	1.39	-1.99	0.40	26-27	0	10	5	18	7	sw.	Earl H. Kruschwitz.
Wahpeton	Richland	962	54	61.2	-4.6	90	22	36	4	2.92	-0.66	1.41	1	0	14	9	13	8	sw.	W. J. Cavanaugh.
Average for Eastern Division				58.7	-5.0	98	22	28	8	2.26	-1.28	2.74	1-2	0	10	9	12	9	sw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,014	50	55.7	-7.5	86	22	33	4	2.65	-0.77	0.81	1	0	13	4	13	13	sw.	U. S. Airway Comm. Sta.
Bisbee	Towner	1,601	43	60.0	-2.1	94	22	33	4	2.95	-0.41	0.97	29	0	12	15	7	8	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	71	58.2	-6.0	95	21	37	2	1.94	-1.29	0.51	7	0	12	3	11	16	se.	U. S. Weather Bureau.
Bismarck Airt. 24 mi. SE	Burleigh	1,650	6	58.0	-4.9	95	22	37	14	1.74	-1.61	0.54	6-7	0	12	4	10	16	se.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	54	56.9	-4.9	93	22	34	3	2.97	-0.22	0.92	28-29	0	14	11	8	11	se.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	21	57.1	-5.4	91	22	32	3	2.19	-1.21	0.88	28	0	9	6	10	14	sw.	R. L. Williams.
Carson, 24 miles SW	Grant	2,500	34	55.1	-8.6	94	22	34	3	1.79	-1.69	0.52	1	0	9	5	18	7	nw.	J. W. Evans.
Center	Oliver	2,100	8	56.7		94	21	33	3	1.40		0.35	7	0	7	12	11	7	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	57.6	-6.2	94	22	35	3	3.29	+0.13	0.92	29	0	11	14	7	9	w.	Geo. A. Pauls.
Dunsmuir, 2 miles NNE	Rolette	1,682	50	56.4	-5.0	92	22	30	3	3.24	+0.23	0.98	28	0	12	8	7	15	w.	State Tuberculosis San.
Eckman	Bottineau	1,500	40	57.4	-4.6	93	22	32	4	2.18	-0.80	0.44	14	0	12	5	16	9	se.	E. R. Sherman.
Fessenden	Wells	1,610	34	58.3	-4.3	93	21	32	4	1.09	-2.89	0.44	28	0	7	8	14	8	n.	John V. Zuber.
Fort Yates	Sioux	1,670	46	57.6	-9.0	92	21	35	16	2.62	-0.85	1.20	6	0	7	12	9	9	nw.	P. J. Jacobson.
Fort Totten, 6 1/2 miles NE	Ward	1,657	25	57.2	-4.7	95	22	31	4	2.71	-0.27	0.78	28-29	0	15	15	6	9	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	69	54.6	-8.3	95	22	36	27	2.36	-1.06	0.75	26	0	11	4	13	13	w.	Mae H. Vorachek.
Granville	McHenry	1,504	39	57.9	-4.8	96	22	32	3	2.45	-0.74	0.68	28	0	14	14	8	8	nw.	Fred Roble.
Hansboro	Towner	1,597	38	56.4	-4.4	90	22	33	2	2.93	-0.39	0.99	28	0	10	12	7	11	nw.	W. E. Dishier.
Harvey	Wells	1,596	43							1.57	-1.80	0.52	28	0	8	9	14	7	nw.	H. J. Reynolds.
Leeds	Beaumont	1,515	5	58.4		95	22	30	4	1.89		0.70	28	0	7	3	20	7	nw.	John Dulmage.
Linton	Emmons	1,711	29	58.8	-6.4	92	21	35	16	3.98	+0.71	0.77	1	0	12	3	9	18	nw.	Wm. Heyerman.
Maddock, 1 mile E	Beaumont	1,604	31	58.0	-4.2	96	22	32	4	1.50	-1.89	0.76	28-29	0	11	4	17	9	nw.	Benson Cy. A. & T. Sch.
Mandan, 14 miles SW	Morton	1,750	32	58.1	-6.3	93	21	36	27	2.01	-1.27	0.65	7	0	9	8	8	14	se.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	17	59.8	-3.8	94	22	34	3	2.60	-0.79	0.88	1	0	13	10	7	13	nw.	Soo Line Agent.
McClusky	Sheridan	1,943	28	57.6	-4.7	93	21	33	3	2.21	-1.25	0.66	28	0	10	5	14			

Climatological Data for June 1945—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Epping	Williams	2,224	37	56.8	-6.3	99	22	35	14†	2.80	-0.51	0.83	26	0	11	9	14	7	se.	T. Beachler.
Fairfield, 9½ miles N	Billings	2,650	17							2.64	-1.09	0.86	6-7	0	10	11	10	9	sw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	28	55.2		92	22	33	14	2.85	-0.57	0.45	4	0	15	3	14	13	nw.	Verne King.
Golva, 1 mile E	Golden Valley	2,781	5	54.3	-8.3	94	22	35	14	2.46	-1.13	0.63	6-7	0	16	2	4	24	se.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	57.8	-3.2	98	22	37	4†	3.73	+0.77	1.11	28	0	14	10	8	12	se.	L. D. Nielson.
Halliday	Dunn	2,073	4							2.27		0.62	7-8	0	8	7	15	8	se.	John Kisse.
Hettinger	Adams	2,675	39	56.1	-7.9	90	21†	34	14	2.44	-0.72	0.61	6	0	14	5	13	12	se.	A. W. Anderson.
Kenmare	Ward	1,799	14	58.0	-4.4	95	22	35	4	3.86	+0.97	0.91	10	0	15	15	4	11	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	56.6	-6.8	95	22	32	14	2.55	-0.58	0.70	4	0	9	4	12	14	nw.	S. P. Grane.
Medora	Billings	2,271	31	57.9		96	22	35	14	1.81	-1.61	0.35	6	0	11	13	9	8	w.	Harry Roberts.
Mott	Hettinger	2,424	39	56.2	-8.8	94	22	34	3	2.47	-0.78	0.76	1	0	13	3	11	16	nw.	Oscar W. Wick.
New England	Hettinger	2,621	54	57.8	-5.8	94	21	36	3	3.20	+0.04	0.60	4	0	11	8	17	5	se.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		4	56.4		90	22	38	3	2.40		0.72	6-7	0	12	10	10	10	w.	Peter F. Fieck.
Parshall	Mountrail	1,929	31	56.6	-5.4	94	22	35	4†	2.84	-0.65	0.70	26	0	16	5	20	5	se.	C. E. Shubert.
Portal	Burke	1,954	32	56.2	-4.4	96	22	31	15	3.54	+0.45	0.93	28-29	0	17	9	14	7	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	56.3	-5.2	96	22	34	29	2.06	-1.23	0.47	28	0	15	7	13	10	se.	E. J. Lewis.
Richardton, 1½ miles N	Stark	2,467	30	57.0	-6.1	91	22	34	3	2.89	-0.58	1.55	1	0	11	3	13	14	se.	Assumption Abbey.
Ryder	Ward	2,108	17							2.28	-0.83	0.67	8	0	9	7	11	12	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	55.3	-8.0	94	22	37	13†	4.76	+1.39	0.85	1†	0	17	8	14	8	.....	H. J. Bugge.
Stanley	Mountrail	2,258	8	55.0		94	22	32	4	1.96		0.40	8	0	10	7	14	9	w.	Leroy Edwards.
Tagus	Mountrail	2,179	17							2.46	-0.59	0.55	28-29	0	12	11	8	11	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	17							2.01	-1.05	0.45	28-29	0	15	2	17	11	w.	Morris J. Pederson.
Trotters	Golden Valley		20							2.50	-0.83	0.53	6-7	0	16	2	20	8	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	57.9		95	22	36	3†	1.91		0.53	7-8	0	13	4	17	9	e.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	57.0	-6.1	98	22	35	14	3.13	-0.02	0.79	9	0	14	6	17	7	nw.	J. C. Zeller.
Wildrose	Williams	2,258	16							3.72	+0.62	0.77	22	0	17	16	8	6	w.	Jonathan Winkjer.
Williston	Williams	1,878	67	57.6	-5.1	99	22	40	2	2.61	-0.82	0.83	23	0	17	3	10	17	w.	U. S. Weather Bureau.
Average for Western Division				56.5	-6.2	99	22	31	15	2.77	-0.72	1.29	26	0	13	7	12	11	nw.	
Average for the State				57.5	-5.3	99	22	28	3	2.48	-1.02	2.50	27-28	0	11	8	12	10	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
⁴ Best available used for stations not equipped with recorders.

Daily Temperatures for June 1945																																		
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum...	45	46	50	55	56	54	50	60	63	68	75	66	58	64	62	67	67	72	71	74	84	86	81	74	76	77	79	68	68	60	65.9	
	Minimum...	39	35	41	33	43	43	45	46	46	44	46	52	48	42	39	36	43	42	50	42	57	61	60	44	41	55	58	50	46	39	45.5	
Bismarck Airport	Maximum...	47	47	54	56	59	58	52	60	65	74	80	69	60	69	63	70	71	75	76	80	94	95	78	80	82	83	79	67	68	56	68.9	
	Minimum...	41	38	42	38	46	46	46	48	44	42	48	54	48	37	41	39	43	47	51	45	60	63	56	50	44	58	58	49	46	44	47.1	
Bottineau	Maximum...	49	60	59	65	66	64	63	62	69	72	79	67	69	65	62	66	70	74	71	76	92	93	75	74	78	74	78	56	49	55	68.4	
	Minimum...	40	35	34	35	42	45	47	46	46	45	54	46	36	41	37	39	41	45	48	47	56	62	63	45	44	57	53	52	39	41	45.4	
Carson	Maximum...	58	49	49	49	45	46	50	66	63	68	70	70	64	58	62	58	65	71	71	70	90	94	78	80	79	79	75	62	69	51	65.4	
	Minimum...	39	37	34	42	40	38	42	46	43	42	50	52	50	35	36	39	37	43	45	42	50	56	62	50	51	56	53	49	46	38	44.8	
Crosby	Maximum...	44	55	62	62	62	58	55	55	68	68	78	70	66	59	66	68	73	73	73	82	95	99	73	74	81	83	77	58	49	49	67.8	
	Minimum...	40	38	41	33	39	44	45	45	45	50	48	45	37	42	36	41	36	44	48	44	57	60	56	46	45	59	55	52	41	39	45.0	
Devils Lake	Maximum...	43	51	61	66	68	65	63	59	66	74	73	69	66	66	59	66	68	75	68	77	92	92	78	74	78	74	81	62	52	54	68.0	
	Minimum...	36	35	37	36	38	46	48	48	50	46	52	50	49	42	42	40	48	49	52	46	58	68	57	48	50	58	58	46	42	42	47.2	
Dickinson Airport	Maximum...	50	54	58	45	48	47	50	63	64	74	75	68	65	64	61	65	67	75	70	79	96	93	73	75	77	79	74	63	65	52	66.3	
	Minimum...	39	38	36	41	40	41	42	47	47	47	43	49	48	40	38	37	40	40	44	45	43	56	61	52	51	52	58	51	44	42	39	44.8
Dunn Center	Maximum...	45	61	61	54	54	49	49	56	65	71	74	67	64	62	63	67	68	70	71	76	88	92	72	74	78	77	73	59	59	50	65.6	
	Minimum...	42	38	33	36	41	42	41	42	44	42	45	45	43	37	38	41	39	45	45	39	47	56	59	48	43	54	53	45	43	37	43.4	
Fargo Airport	Maximum...	47	51	62	68	68	67	61	60	68	70	78	72	64	73	69	73	67	79	73	76	87	92	90	81	79	74	85	75	68	62	71.3	
	Minimum...	39	38	35	38	38	49	50	50	51	55	52	50	50	44	43	48	41	53	48	57	64	65	56	47	58	61	56	48	44	....	49.3	
Fessenden	Maximum...	50	48	59	66	67	62	60	67	73	81	73	66	69	65	71	65	74	72	80	93	92	90	73	83	80	85	75	68	54	....	70.7	
	Minimum...	38	34	38	32	43	45	45	47	43	41	52	52	49	40	39	42	47	52	44	58	66	68	47	44	48	56	51	35	40	....	45.9	
Fullerton	Maximum...	49	50	54	64	65	62	55	60	66	72	78	71	61	70	64	72	69	75	72	79	86	90	87	80	80	83	74	71	62	....	70.0	
	Minimum...	42	37	42	35	46	48	48	48	50	50	48	54	50	46	47	40	48	45	53	47	50	60	64	52	46	57	58	55	51	....	48.6	
Garrison	Maximum...	47	50	59	59	62	68	49	55	66	73	79	71	68	65	65	73	72	74	76	81	94	95	76	84	82	76	77	60	56	....	68.5	
	Minimum...	40	36	36	37	45	44	45	45	45	44	52	50	45	39	40	44	40	45	48	42	56	61	51	45	41	59	56	46	45	....	45.4	
Golva	Maximum...	51	57	63	47	45	46	50	62	63	70	74	68	63	62	64	66	62	75	70	77	88	94	74	74	78	74	70	58	65	....	65.5	
	Minimum...	42	42	40	40	40	40	41	42	41	40	48	46	37	35	39	42	36	41	44	39	52	57	55	49	40	58	48	43	41	....	43.1	
Grafton	Maximum...	52	55	62	66	68	70	70	64	69	77	77	73	74	71	64	70	69	79	75	76	90	92	91	78	78	73	83	79	64	59	72.4	
	Minimum...	39	37	34	35	35	45	49	47	47	51	57	47	46	42	41	49	45	56	44	55	66	66	50	44	55	60	56	46	47	....	48.8	
Grand Forks Airport	Maximum...	44	53	61	64	70	71	66	69	70	76	76	70	67	72	63	69	66	79	70	76	89	93	89	78	78	75	84	72	56	58	70.6	
	Minimum...	36	37	32	34	34	46	50	54	48	46	48	47	46	47	44	42	47	45	50	43	56	63	55	50	46	53	58	56	45	42	46.0	
Jamestown Airport	Maximum...	44	50	55	64	65	63	54	57	65	74	78	71	62	68	62	69	69	76	72	76	89	90	84	79	79	75	83	64	58	....	68.8	
	Minimum...	38	36	34	35	44	47	47	47	48	43	51	48	47	42	36	44	42	50	45	52	63	55	49	45	55	58	52	46	41	....	46.6	
Kenmare	Maximum...	47	57	62	61	67	61	54	55	67	70	77	70	68	65	65	69	75	73	74	80	93	95	74	75	82	76	79	58	50	....	68.8	
	Minimum...	40	39	42	35	43	46	45	46	47	51	51	47	47	43	43	36	43	39	52	47	48	61	66	60	48	51	59	58	53	....	42.7	
Langdon	Maximum...	46	54	60	66	67	67	68	60	66	76	74	71	69	68	66	70	68	74	69	73	89	93	88	76	77	79	68	57	58	....	69.9	
	Minimum...	37	34	32	34	33	40	45	46	47	46	51	52	39	42	39	35	45	45	52	42	55	61	66	43	45	58	57	54	41	....	48.3	
Marmarth	Maximum...	60	61	63	55	45	56	52	65	65	71	77	76	65	65	65	68	62	65	73	75	91	95	86	74	80	77	75	61	68	....	64.8	
	Minimum...	48	44	41	40	40	40	42	47	41	41	45	47	49	49	32	37	40	40	36	45	44	54	57	57	61	45	60	52	43	....	40.4	
Minot Airport	Maximum...	48	50	56	62	66	62	51	55	64	70	79	70	64	61	61	65	71	75	73	78	93	94	77	76	79	74	77	62	49	50	67.7	
	Minimum...	41	37	38	35	44	46	46	47	47	47	47	55	47	43	40	42	48	44	53	50	47	62	71	52	50	48	60	59	44	42	42.7	
Mott	Maximum...	55	52	57	59	46	47	51	61	65	73	71	69	63	63	62	67	69	75	72	78	92	94	79	75	77	78	75	62	62	....	67.5	
	Minimum...	40	39	34	41	40	42	42	47	45	42	48	52	50	35	37	42	39	41	46	42	57	61	60	49	46	60	56	46	45	....	48.8	
Pembina Airport	Maximum...	46	55	66	65	67	71	69	66	73	81	78	69	73	65	61	67	68	78	69	77	90	93	80	75	80	76	76	66	54	....	70.6	
	Minimum...	36	38	34	35	37	43	50	49	47	46	51	50	41	46	42	41	48	47	50	48	55	64	58	46	47	56	60	53	44	....	42.2	
Sharon	Maximum...	48	50	61	69	69	67	59	67	65	76	79	70	64	67	63	60	68	76	70	75	88	90	86	78	79	80	84	74	60	....	69.9	
	Minimum...	38	34	34	37	37	42	46	47	48	54	50	46	49	45	40	37	47	43	53	43	64	68	48	49	64	56	56	45	39	....	47.7	
Steele	Maximum...	50	47	54	59	62	61	52	59	64	75	77	70	64	66	59	67	66	73	71	75	87	89	80	75	79	80	79	72	64	....	67.4	
	Minimum...	38	34	34	30	44	44	45	45	40	38	47	51	48	37	39	35	40	42	47	44	55	63	66	48	44	55	56	52	47	....	41.5	
Valley City	Maximum...	50	49	57	65	67	65	62	57	66	72	78	74	66	70	63	72	67	77	75	76	87	90	90	80	79	79	83	79	71	....	71.7	
	Minimum...	41	37	36	33	43	49	49	49	51	46	52	56	48	46	45	39	44	40	55	41	54	63	67	52	42	59	55	59	49	....	42.8	
Wahpeton	Maximum...	51	52	60	67	68	66	64	57	66	69	76	78	68	72	72	70	68	76	78	75	84	90	90	89	81	78	85	75	70	....	72.2	
	Minimum...	43	37	39	36	41																												

Daily Precipitation for June 1945

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James	.66	.35					.11	.01	.04			.18			.05		.23		.07								.07		.35			2.12	
Casselton	Red																																	
Cooperstown	Sheyenne	.52	T.					.05				.23				T.	.62		.05								.07	.28	.23	T.			2.05	
Courtenay	James	.51	.02				.07		.01	.03		.23			.04		T.		.06								.06	.36	.17				1.57	
Devils Lake ¹⁵	Devils Lake	.13						.07	.01			1.08	.33	T.	.03	T.	.01	.01	.05	.12							.03	.12	.14	.45	.17	.05	2.54	
Edgeley	James	.70	.02			T.	.10	.25	.18				.13	.29		T.				.04	.04						.12	.14	.06	.31	.06	.02	2.03	
Edmore	Devils Lake	.05						.06	.42	.11		.24	.29	.33	.20	T.				.10							1.76	.84	.31	.06			3.43	
Ellendale	James	.41	.06										.33	.20	T.					.10								.44	.02	T.	T.		2.39	
Fargo ¹⁵	Red	.20	.01					T.	.02	T.	T.		.19	.02	.03	T.		.01	T.	.07							.38	.11	.02	T.	T.		0.76	
Forman	Sheyenne	1.00						.31	.09				.02	.15	.20	.04	T.			T.								.76	.05	T.	T.		2.64	
Fullerton	James	.61					.11	T.	.56		.02		.15	.28			.05			.11							.28	.11					2.28	
Gackle	do																											.09	.52	.16	T.			
Grafton	Red	.72	.02					T.	T.	.02		.02	.01	.02			T.	.09		.16								.05	.82	.19	.06	.03	2.33	
Grand Forks Airport ³	do	1.60	.01					.03	.02			.47	.16			.06		.01	.14	.01	.05							.82	.19	.06	.03		3.77	
Hankinson ²	do	2.17	.32					.17	.01	.02	.28		.07	.04	.47	.07		.07		.04									.02	.20	.09			3.97
Haunah	Pembina											.37	T.	.45	.52		.10	.20	.15									T.	.25	.85	.20	T.		3.09
Hillsboro	Red	.38	T.					T.	T.	.03	T.	T.	.08	T.			T.	.14		.09								.11		.35		T.		1.18
Jamestown Airport ⁵	James	.54	T.					.12	.01	T.		T.	.25	.05	.04		T.	T.	.01	.03								.35		.17	T.	T.	1.57	
Langdon	Pembina	.02	.03					.01	T.			.01	.29	T.	.05	.03		.23	.20									.03	.30	.41	.08	.01	1.69	
Larimore	Red	1.02	.50	T.				.01	T.			.02	.44	.01		.08		.14	.19									.03	.30	.41	.08	.01	2.57	
Lisbon	Sheyenne	.47	.29					.12	T.	.22			.07	.03	.08		.02	.01	.17	.08								T.	.35	.02	.08		1.75	
Mayville	Red	.40	.02					.03				.27	.12	.02			.02	.01	.17	.08								.03	.02	.17	T.		2.36	
McHenry	James	.42	.02					.04				.48	.12	.02	.04		.01	.15	.03									.04	.28	.17	.03		1.83	
McLeod	Sheyenne	.65	.53					.11	.13	.03			.04	.18	.05		.12											.10	.13				2.07	
Oakes ²	James	.58	.20					.27	.05	.05			.14	.03	.61				.05									.19	.21	.06	.04		2.29	
Park River	Red	.52						.04	T.			T.	.09			T.	T.	.03	.01	.25								.19	.90	.27	T.	.07	2.33	
Pembina Airport ³	do	.54	T.									.22	.14		.17	T.	.06	.03	.01	.09								.02	.02	.74	.18	.01	2.23	
Petersburg	do	.53						.05				1.09	.09				.10	.09	.09	.05	.04							.01	.50	.35	.04		2.85	
Sharon	do	.69	.01					.02	T.			.08	.16		T.		T.	.16	.01	.01								.06	.20	.23	.03	T.	1.65	
Valley City	Sheyenne	.33	.04					.04		.01			.25	.06	T.		T.		.01									.15	.40	.10			1.39	
Wahpeton	Red	1.41	.07					.13	.05		.51		.02	.07	.22		.06	.06		.06								.06	.10	.10			2.92	
Middle Division																																		
Ashley ³	Missouri	.81	T.				.10	.46	.05	.03			.22	.36			.06		.03	.01								.31	.05	.16	T.		2.65	
Bisbee	Devils Lake	.05							.08			.04	.11	.09			.26		.03	.01								.06	.03	.96	.97	.12	2.95	
Bismarck Airport ¹⁵	Missouri	.11	T.				.04	.47	.07	T.		.29	T.	.03			.03		.07	.29					.05			.19	T.	.38	.01	T.	1.74	
Bottineau ²	Mouse	.05	.08						.06				.32			.16	.21	.30		.29					.03			.02	.06	.29	.92	.18		2.97
Butte	do	.06						.35	.32	T.						T.	T.	.07	T.	.06	.05								.88	.34	.06		2.19	
Carson	Heart	.52				.12	.25	.45	.05				.08					.06		.11									.15				1.79	
Center	Missouri	.30				T.	.10	.35	.13				T.																.35	T.	T.		1.40	
Drake ²	Mouse	.70	.15	T.				.10	.27	.02			.20					.35		.05								.013	.54	.92	.06		3.29	
Dumselth	do	.18	.04	T.					.03			.47	.20			.02	.16	T.	.37	.08								.13	.52	.98	.14	T.	3.24	
Eckman	do							.06	.09			.03	.22	.15	.44		.01		.10									.06	.42	.42			2.18	
Fessenden	James	.14						.12	.05				.14				T.		T.	.08									.25	.10	.38		2.62	
Fort Yates	Missouri	.37					.120	.22							.10				T.										.10	.38			2.71	
Foxholm	Mouse	.51	.02					.08	.29	.10	.01		.04			.17	.06		.02	.05	.08								.21	.20	.78	.14	2.36	
Garrison ³	Missouri	.04					.13	.69	.16							.04		.03		.05					.11				.75	.28	.07	.04		2.45
Granville	Mouse	.03	.02					.15	.20				.28			.03	.06	T.	.02	.15	.16								.10	.68	.36	.08		2.93
Hansboro	Devils Lake	.17	T.									.38	.18			.15	.01			.16									.34	.99	.06		3.98	
Linton	Missouri	.77				.18	.42	.58				.32	.39	.10		T.	.03	.03	.06	.03	.10								.19	.53	.37	T.	1.50	
Maddock	Sheyenne	T.						.08	.05	T.			.15			.05	.03	.06	.03	.13									.16	.66	.10	T.	3.98	
Mandan ²	Missouri	.23	T.			.03	.65	.06	T.			.29	.08			.04	T.	T.		.12	.13								.26	.33			2.01	
Max ²	do	.88	.01					.09	.61	.11			.08			.08				.07									.03	.04	.52	.03	2.60	
McClusky	do	.25						.26	.10	T.	.08	.40	.01							.13									.03	.86	.02	.10	2.21	
Milot Airport ³	Mouse	.03	T.				T.	.29	.25	T.		.09	T.	.04	.39		.06		.05	.13									.17	.03	.55	.26	.05	2.23
Mohall	do	.34	.05					.15	.12	.02		.12	.21	.26			.14		.14										.25	.69	.45	.05	2.99	
Napoleon ²	Missouri	1.00						.37	.37			.02	.71	.09			.06	.02		.14									.75	.30			3.83	
New Salem	Heart	.11						.33	.61	.08		.02	.06			.02		.22											.40	.10	.05		1.76	
Pettibone	James	.88						.04	.22			T.	.08			.02				.15									.06	.04	.06	.01	1.83	
Rolla	Devils Lake	.22	.01					.04	.12	.01	T.	.15	.20	.12	.02		.10		T.	.15									.12	.55	.43	.12	4.34	
Rugby	Mouse	.11	.04					T.	.14			.07	.17	T.	.24	T.	T.			.45									.05	.14	.24	.10	2.75	
Selfridge	Missouri	T.	T.		.10		.160	.20		T.		.62	.03	.20		T.	.05	.12		.07									.60	.52	.35		4.36	
Steele	do	.69	.03				T.	.13		T.			.54			T.		.02	.05										.17	.04	.40	T.	.05	2.73
Towner	Mouse	.25	T.									.22	T.	T.		.17		.05		.29									.08	.42	.37	.74	.09	2.21
Turtle Lake	Missouri	.06					T.	T.					.02			.05	.01			.16					.04				T.	.04	.22	.09	.02	1.15
Tuttle	do	.49	.03					.50	.13				.54			.12	.01	.06		.07									.10	.64	.05	.04	2.78	
Underwood	do																																	

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

⁸ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO. Minneapolis. 8-9-45-1050]

51.05
NNT
V.54'
Not right

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIV BISMARCK, N. D., JULY 1945 No. 7

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Temperatures during the first half of July were below normal while during the last half they averaged above normal. Only 12 stations reported readings of 100° or higher with 9 of them in the western division. The precipitation was below normal in the eastern and western divisions and slightly above normal in the middle division. The precipitation was well distributed throughout the month and only a few stations had washing and flooding showers. Destructive hailstorms occurred on July 3d, mostly in Morton, Grant, Williams, Ward, and western McLean counties, and on July 21-22d in Emmons and Logan counties. Sunshine was slightly below normal in the western half of the state. July was a very good month for crops. By the end of the month small grain was ripening in the southern part of the state and corn, although late, was making good progress. Even in the drier parts of the state crops were good due to the cool weather and the sub-soil moisture accumulated from the above normal precipitation during 1940-44, especially the heavy rains in June, August, and November 1944.

TEMPERATURE

The mean temperature for the state was 67.8°, or 1.2° below the 1892-1945 average for July. The mean temperature for the eastern division was 67.8°; for the middle division, 67.4°; and for the western division, 68.2°. The highest mean temperature was 70.2° at Linton, and the lowest, 63.0° at Belcourt, making a range in mean temperature of 7.2°. The absolute range was 72°, from 102° at Epping, Grenora, and Watford City on the 30th, to 30° at Wishek on the 20th. The average daily excess in temperature for the state since January 1, 1945, is 0.7°.

PRECIPITATION

The average precipitation for the state was 2.31 inches, or 0.12 inch less than the 1892-1945 average for July. In the eastern division the average amount was 2.58 inches; in the middle division, 2.50 inches; and in the western division, 1.85 inches. The greatest monthly amount reported was 5.50 inches at Cavalier; the least, 0.64 inch at Bowman. The greatest amount recorded in any 24 consecutive hours was 3.70 inches at Hillsboro on the 18th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 1.86 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Fogs		2	1	1					2					1	3		5	8	16	4	3	10	2				4	6	13	1	12	7	
Lunar halos																																	
Solar halos							1																										
Hail			7	1	2			3		2						1					2	1					1	3		1		2	2
Thunderstms		3	15	23	6	5		24	4		12	3	4	2	21	2	16	25	15	4	11	6	3	4	4	30	8	1	3	9	16		

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.29	1	29.66	8	9.6	30	e.	3	81	86	55	52	75	39
Devils Lake	30.23	1	29.65	8	7.2	33	n.	26	86	90	61	59	63	60
Fargo	30.21	2	29.60	8	10.9	34	w.	11	82	89	57	58	70	39
Williston	30.30	1	29.59	30	6.4	32	w.	17	71	81	47	39	81	28

† And other dates.

COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	68.7	108	31	3.44	2.98	3.28	3.23	0	8	19	8	4	
1893...	69.5	112	35	2.54	1.94	1.64	2.04	0	7	17	10	4	
1894...	71.7	107	38	0.92	0.73	0.25	0.63	0	3	20	8	3	
1895...	66.1	102	29	3.12	2.44	3.13	2.90	0	8	14	11	6	
1896...	67.5	107	31	1.67	1.48	1.37	1.51	0	6	15	10	6	
1897...	68.9	109	38	6.46	4.43	2.40	4.43	0	9	13	11	7	
1898...	67.6	106	28	3.07	2.40	2.00	2.49	0	7	15	11	5	
1899...	68.3	109	32	2.37	2.30	2.35	2.34	0	6	18	9	4	
1900...	67.9	107	33	2.89	2.26	1.60	2.25	0	6	16	10	5	
1901...	70.8	110	40	5.10	4.08	3.66	4.28	0	6	18	7	6	
1902...	67.6	106	34	2.34	2.00	2.10	2.15	0	5	20	7	4	
1903...	66.7	109	26	2.59	1.77	2.32	2.23	0	7	17	8	6	
1904...	64.4	102	34	2.96	2.83	0.60	2.13	0	6	17	8	6	
1905...	65.6	100	32	4.27	3.90	3.17	3.78	0	8	17	9	5	
1906...	66.9	102	34	2.90	1.32	0.45	1.56	0	11	13	8	10	
1907...	65.8	103	31	2.69	3.90	2.60	3.06	0	9	16	11	4	
1908...	68.6	103	31	1.89	2.37	1.46	1.91	0	6	19	9	3	
1909...	67.1	99	34	3.45	2.94	1.80	2.73	0	8	15	9	7	
1910...	70.0	114	33	1.30	2.10	1.40	1.60	0	5	18	9	4	
1911...	65.1	107	23	2.25	1.76	1.10	1.70	0	6	18	10	3	
1912...	66.0	106	30	4.52	3.07	3.38	3.66	0	10	12	13	6	
1913...	65.6	103	35	2.64	2.38	1.65	2.22	0	8	17	8	6	
1914...	72.1	109	36	2.62	1.85	2.03	2.17	0	6	19	9	6	
1915...	62.3	97	30	2.42	2.66	4.30	3.13	0	11	12	11	3	
1916...	73.1	105	33	4.71	2.76	1.41	2.96	0	7	19	9	3	
1917...	70.9	114	27	1.96	1.80	0.87	1.54	0	7	17	11	3	
1918...	65.5	102	34	2.84	2.90	2.46	2.73	0	7	14	10	7	
1919...	71.2	105	37	3.15	1.11	1.32	1.86	0	5	18	10	3	
1920...	68.3	103	31	2.27	2.33	1.73	2.11	0	7	18	11	2	
1921...	71.4	110	35	4.47	2.87	1.88	3.07	0	7	17	10	4	
1922...	65.6	100	30	2.28	2.44	2.72	2.48	0	8	16	11	4	
1923...	71.2	103	35	2.90	3.34	2.91	3.05	0	8	16	11	4	
1924...	65.5	99	32	1.93	2.04	1.83	1.93	0	6	18	9	4	
1925...	66.7	106	29	1.43	1.33	1.30	1.35	0	6	18	8	4	
1926...	70.3	104	32	2.35	1.78	1.99	2.04	0	7	18	8	5	
1927...	65.4	97	28	2.33	3.11	3.09	2.84	0	9	15	10	6	
1928...	67.4	96	38	4.65	5.32	4.49	4.82	0	10	16	10	5	
1929...	70.6	109	34	1.93	1.09	0.78	1.27	0	5	21	8	2	
1930...	72.3	107	34	1.83	0.80	0.49	1.04	0	5	21	8	2	
1931...	70.6	111	37	2.89	3.20	3.01	3.03	0	8	17	8	6	
1932...	70.0	108	36	1.95	2.22	1.68	1.95	0	7	19	8	4	
1933...	71.9	109	36	2.04	2.13	1.83	2.00	0	7	19	9	3	
1934...	71.8	112	29	1.58	1.30	0.77	1.18	0	6	18	10	3	
1935...	73.8	110	45	3.90	5.44	3.90	4.41	0	10	17	11	3	
1936...	79.9	121	38	0.71	0.48	0.92	0.70	0	4	22	8	1	
1937...	71.7	111	40	3.70	2.70	2.40	2.93	0	9	15	10	6	
1938...	69.7	104	39	3.11	3.85	3.05	3.34	0	9	15	13	3	
1939...	72.6	108	37	1.57	1.82	2.04	1.81	0	7	19	9	3	
1940...	71.6	107	37	4.29	3.75	3.05	3.70	0	11	14	13	4	
1941...	70.8	106	34	1.40	1.65	2.23	1.76	0	8	15	12	4	
1942...	67.1	97	36	2.71	2.86	1.73	2.43	0	7	13	13	5	
1943...	70.5	103	41	2.88	3.14	2.13	2.72	0	8	19	9	3	
1944...	67.6	102	33	3.41	1.08	0.74	1.74	0	6	16	13	2	
1945...	67.8	102	30	2.58	2.50	1.85	2.31	0	9	16	12	3	
Period	69.0	121	23	2.78	2.46	2.05	2.43	0	7	17	10	4	

Climatological Data for July 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Carrington	Foster	1,579	48	66.6	-2.8	95	23	37	10	2.49	-0.12	0.95	26	0	15	17	3	11	sw.	Soo Line Agent.	
Casselton	Cass	934	50	68.3	-1.6	96	23	39	2	2.65	-0.04	1.50	26	0	11	18	12	1	s.	C. Hayford.	
Cavalier	Pembina	894	38	67.2	.....	96	23	44	1	5.50	+2.86	2.52	27	0	7	16	9	6	se.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	96	23	44	1	2.98	+0.45	1.35	26	0	7	16	11	4	nw.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	67.9	-1.7	99	23	34	2	2.87	+0.28	1.08	26	0	9	14	6	11	nw.	R. J. Lockner	
Courtenay	Stutsman	1,523	15	.....	.....	93	23	42	10	3.69	+1.07	0.93	26	0	13	19	9	3	s.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	67.1	-0.3	94	23	42	10	3.47	+0.90	1.00	26	0	11	11	15	5	s.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	45	68.6	-1.3	101	23	36	2	1.36	-1.21	0.38	25	0	6	13	14	4	s.	N. Dak. Agri. Exp. Sta.	
Edmore, 1 1/2 miles W.	Ramsey	1,524	22	63.7	-3.8	91	23	36	2	3.59	+0.75	1.57	26	0	12	23	6	2	nw.	Mike Davis.	
Ellendale	Dickey	1,457	47	68.4	-2.5	96	23	40	2	1.70	-0.95	0.63	8	0	7	17	10	4	s.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	65	68.8	+0.7	96	23	40	2	1.22	-2.21	0.55	26	0	9	8	14	9	s.	U. S. Weather Bureau.	
Forman	Sargent	1,249	54	69.8	-0.3	97	22	40	2	1.14	-1.74	0.38	26	0	6	22	7	2	sw.	Helge Dyste.	
Fullerton	Dickey	1,439	48	69.6	-0.6	97	23	39	2	0.82	-2.06	0.21	13	0	10	13	16	2	se.	F. O. Alin.	
Gackle	Logan	1,951	15	67.8	.....	95	23	38	2	2.08	-0.60	0.55	22	0	11	20	4	7	se.	Mrs. Walter Kranzler.
Grafton	Walsh	827	54	67.9	-0.9	96	23	41	9	1.89	-0.87	0.46	8	0	10	18	9	4	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	55	67.8	-0.7	97	23	43	2	2.79	+0.01	0.67	4	0	13	16	8	7	n.	University of N. Dak.	
Grand Forks Airt., 2 1/2 mi. W	Grand Forks	834	5	67.4	.....	96	23	41	2	2.56	.....	0.93	4	0	11	8	13	10	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	69.6	-1.8	97	24	41	10	2.22	-0.65	0.60	27	0	11	13	8	10	se.	Soo Line Agent.	
Hannah	Cavalier	1,568	52	65.2	-1.0	89	18	40	10	2.03	-0.40	0.80	11	0	7	3	24	4	sw.	A. E. Prior.	
Hillsboro	Trall	901	40	68.6	-2.1	97	23	41	2	5.22	+2.58	3.70	18	0	8	17	10	4	n.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	54	68.8	-0.8	97	21	35	2	1.91	-0.79	0.65	26	0	10	9	21	1	nw.	N. Dak. State Hospital.	
Jamestown Airt., 2 mi. NE	Stutsman	1,494	5	67.8	.....	96	23	35	2	2.74	.....	0.95	26	0	10	9	18	4	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	67.4	.....	98	31	38	2	3.77	.....	1.12	26	0	12	16	12	3	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	50	65.6	-0.7	90	23	38	2	2.78	+0.28	1.38	15-16	0	12	12	15	4	nw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	53	67.3	-0.8	97	23	38	10	2.06	-0.88	0.76	26	0	8	20	5	6	se.	Chas. Ouradnik.	
Lisbon	Ransom	1,091	42	68.7	-1.7	98	23	40	2	1.90	-1.00	1.32	27	0	8	14	5	12	nw.	J. O. Halverson.	
Mayville	Trall	975	50	69.2	-1.0	97	23	41	10	2.76	+0.05	1.28	19	0	12	10	17	4	s.	H. A. Ragaz.	
McLeary, 3 miles NE	Eddy	1,509	23	65.4	-2.7	93	23	35	2	2.97	+0.17	0.83	26	0	10	15	11	5	nw.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	34	69.4	-2.0	98	22	38	1	1.43	-1.42	0.71	26-27	0	6	19	9	3	se.	J. G. Carlson.	
McVie	Nelson	1,467	4	.....	.....	97	22	39	2	2.92	.....	0.87	26	0	8	7	23	1	sw.	A. M. Casad.
Milnor	Sargent	1,117	13	69.1	.....	97	22	39	2	3.08	+0.29	1.45	26	0	5	24	7	0	w.	E. W. Wilson.
Oakes	Dickey	1,318	17	68.4	-3.3	95	23	37	2	1.05	-1.80	0.25	11	0	8	9	18	4	se.	F. H. Murray.	
Park River	Walsh	995	42	66.8	-1.7	94	23	41	2	2.41	-0.20	0.41	8	0	12	20	9	2	nw.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	795	72	66.3	-1.5	91	22	41	2	3.68	+1.27	1.39	15-16	0	12	6	20	5	s.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	15	66.2	.....	95	23	37	2	3.23	+0.27	0.88	26	0	10	17	12	2	w.	T. C. Overland.
Sharon	Steele	1,516	22	68.0	-2.8	98	23	38	2	2.61	-0.08	1.44	26	0	9	12	15	4	sw.	Nels O. Grefshelm.	
Valley City	Barnes	1,229	41	68.3	-1.8	98	23	38	10	2.34	-0.38	1.38	26	0	10	12	16	3	nw.	Earl H. Kruschwitz.	
Wahpeton	Richland	962	54	69.6	-1.3	94	23	39	10	2.22	-0.73	0.68	26	0	11	13	15	3	sw.	W. J. Cavanaugh.	
Average for Eastern Division				67.8	-1.6	101	23	34	2	2.58	-3.20	3.70	18	0	10	14	12	5	nw.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,025	50	67.7	-2.0	97	23	35	2	1.96	-0.70	1.11	8	0	10	14	12	5	s.	U. S. Airway Comm. Sta.	
Belcourt	Rolette	1,960	1	63.1	.....	90	22	35	10	2.79	.....	1.07	26	0	8	22	4	5	s.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	43	67.5	+0.1	97	20	39	2	3.51	+0.81	0.96	19	0	10	17	10	4	nw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	71	69.8	-0.7	96	21	42	2	1.44	-0.84	0.41	19	0	8	10	16	5	nw.	U. S. Weather Bureau.	
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	6	69.6	+0.2	98	22	39	2	1.98	-0.26	0.55	15	0	6	10	16	5	nw.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	54	65.9	-1.7	93	22	37	2	2.22	-0.17	0.75	26	0	11	15	8	8	nw.	N. D. School of Forestry	
Butte, 3 miles WSW	McLean	1,880	21	66.2	-3.8	83	17	42	2	3.55	+0.82	1.32	18	0	12	16	8	7	nw.	R. L. Williams.	
Carlson, 2 1/2 miles SW	Grant	2,500	34	68.5	-2.3	101	22	39	2	1.02	-0.97	0.67	18	0	4	15	16	0	nw.	J. W. Evans.	
Center	Oliver	2,100	8	67.5	.....	98	21	36	2	2.56	.....	1.15	17-18	0	7	19	11	1	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	68.2	-3.4	94	21	42	2	3.74	+1.44	1.15	26	0	15	22	9	0	s.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	50	66.2	-0.8	91	21	37	2	2.06	-0.61	0.76	26	0	8	13	9	9	w.	State Tuberculosis San.	
Eckman	Bottineau	1,500	40	66.2	-1.8	92	22	39	10	3.46	+1.10	1.37	30-31	0	10	13	17	1	nw.	E. R. Sherman.	
Fessenden	Wells	1,610	34	67.8	-1.6	91	17	40	10	3.71	+1.14	0.93	18	0	13	15	10	6	n.	John V. Zuber.	
Fort Yates	Sioux	1,670	46	69.0	-3.7	99	21	36	2	3.15	+1.07	1.45	3	0	6	21	8	2	se.	P. J. Jacobson.	
Foxholm, 6 1/2 miles NE	Ward	1,657	25	67.3	-2.4	95	30	41	10	1.90	-0.03	0.56	26	0	11	19	1	11	nw.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	69	67.8	-1.4	94	22	42	2	3.24	+0.75	0.91	20	0	11	15	12	4	nw.	Mae H. Vorachek.	
Granville	McHenry	1,504	39	67.2	-1.5	93	17	40	2	2.17	-0.10	0.60	18	0	13	28	2	1	nw.	Fred Roble.	
Hansboro	Towner	1,597	38	64.7	-1.6	90	22	37	10	1.67	-0.87	0.78	26	0	6	20	10	1	nw.	W. E. Disher.	
Harvey	Wells	1,596	43	.....	.....	95	22	38	10	3.64	+1.24	0.66	18	0	12	12	17	2	nw.	H. J. Reynolds.
Leeds	Benson	1,515	5	67.4	.....	95	22	38	10	1.93	.....	0.95	26	0	10	10	20	1	w.	John Dulmage.
Linton	Emmons	1,711	29	70.2	-2.5	100	21	34	2	1.12	-1.01	0.35	13	0	6	17	9	5	se.	Win. Heyerman.	
Maddock, 1 mile E	Benson	1,604	31	67.0	-1.9	95	17	37	2	3.62	+0.93	1.43	19	0	11	12	13	6</			

Climatological Data for July 1945-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Elbowoods	McLean	2,082	53	68.4	-1.5	98	30	41	10	1.38	-1.03	0.60	18	0	7	22	9	0	sw.	H. W. Case.	
Epping	Williams	2,224	37	63.5	-2.3	102	30	40	9	1.16	-0.89	0.30	18	0	6	28	3	0	se.	T. Beachler.	
Fairfield, 9½ miles N.	Billings	2,650	17							1.60	-0.68	0.68	17	0	4	24	6	1	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N.	Billings	2,790	28	67.4		99	30	40	1	0.93	-1.29	0.37	18	0	5	17	14	0	nw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,781	5	66.6	-3.3	98	30	35	1	2.50	+0.70	1.00	8	0	6	12	17	2	nw.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	37	69.6	+2.2	102	30	43	9	1.18	-0.66	0.51	3	0	7	25	6	0	se.	L. D. Nielson.	
Halliday	Dunn	2,073	4							1.34		0.33	8	0	7	18	10	3	se.	John Kisse.	
Hettinger	Adams	2,675	39	68.6	-3.1	98	22	35	1	1.95	-0.33	0.64	19	0	6	13	16	2	.....	Edgar Martin.
Kenmare	Ward	1,799	14	68.9	-0.4	97	22	42	1	2.58	+0.28	0.95	26	0	10	22	4	5	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	37	69.8	-1.4	101	30	37	1	1.55	-0.36	0.93	19	0	4	16	12	3	nw.	S. P. Grane.	
Medora	Billings	2,271	31							1.84	-0.05	0.60	11	0	6	23	8	0	w.	Harry Roberts.	
Mott	Hettinger	2,424	39	69.4	-2.2	99	22	41	10	1.91	-0.22	0.81	17	0	8	5	22	4	nw.	Oscar W. Wick.	
New England	Hettinger	2,621	54	69.7	-0.8	99	22	40	10	3.97	+1.84	3.06	17-18	0	8	16	13	2	nw.	F. S. Sleight.	
New Hradec, 1 mile E.	Dunn		4	67.3		93	22	42	10	0.83		0.35	19	0	5	22	8	1	nw.	Peter F. Ficek.	
Parshall	Mountrail	1,929	31	67.9	-1.7	98	30	40	10	2.51	+0.29	0.75	3	0	11	10	21	0	se.	C. E. Shubert.	
Portal	Burke	1,954	32	66.2	-1.8	99	30	42	9	2.41	+0.34	0.74	24-25	0	7	11	18	2	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	41	66.8	-4.3	96	30	40	10	2.52	+0.25	1.40	20	0	9	14	16	1	nw.	E. J. Lewis.	
Richardton, 1½ miles N.	Stark	2,467	30	68.6	-2.5	94	22	43	3	1.91	-0.55	1.18	18-19	0	6	17	12	2	nw.	Assumption Abbey.	
Ryder	Ward	2,108	17							2.94	+0.71	1.30	20	0	10	22	8	1	nw.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	20	66.9	-3.8	101	30	42	9	1.75	-0.27	0.64	20	0	9	16	15	0	.....	H. J. Bugge.
Stanley	Mountrail	2,258	8																	Leroy Edwards.	
Tagus	Mountrail	2,179	17							2.85	+0.80	0.92	17-18	0	13	16	14	1	nw.	Geo. N. Pilgard.	
Tioga	Williams	2,279	17							1.61	-0.42	0.80	19	0	8	11	19	1	w.	Morris J. Pederson.	
Trotters	Golden Valley		20							0.96	-0.80	0.59	3	0	5	9	22	0	sw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	5	69.8		101	30	43	2	2.32		0.76	20	0	10	15	15	1	nw.	H. Glenn Sims.	
Watford City	McKenzie	2,084	33	69.3	-1.8	102	30	41	5	1.46	-0.54	0.52	18	0	8	14	16	1	nw.	J. C. Zeller.	
Wildrose	Williams	2,258	16							1.60	-0.38	0.47	18	0	10	28	3	0	nw.	Jonathan Winkjer.	
Williston	Williams	1,878	67	70.0	+1.1	100	30	45	1	1.11	-0.78	0.49	3	0	8	9	19	3	se.	U. S. Weather Bureau.	
Average for Western Division				67.8	-1.9	102	30	35	1	1.85	-0.20	3.06	17-18	0	8	17	12	2	nw.		
Average for the State				67.8	-1.2	102	30	30	2	2.31	-0.12	3.70	18	0	9	16	12	3	nw.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for July 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum..	57	75	82	80	72	76	79	84	67	73	82	79	72	75	80	88	89	92	81	83	94	94	97	87	84	84	75	81	82	92	89	81.5	
	Minimum..	38	35	56	49	50	48	44	54	46	42	52	49	52	43	55	62	64	66	63	62	63	66	65	59	58	62	54	49	55	60	50	53.9	
Bismarck Airport	Maximum..	61	83	82	78	77	78	79	83	71	78	90	80	75	80	82	90	93	83	78	84	96	98	92	88	88	88	77	83	84	93	86	83.2	
	Minimum..	43	39	55	51	48	46	45	54	46	44	48	51	58	49	64	58	63	68	65	60	64	69	66	61	61	68	59	51	61	64	58	56.1	
Bottineau	Maximum..	64	80	77	74	71	72	75	80	67	72	81	76	77	80	78	90	92	81	81	83	92	93	90	81	81	79	77	79	82	90	79	79.8	
	Minimum..	44	37	48	46	43	46	43	40	43	38	48	50	52	51	51	54	55	60	58	57	62	65	59	52	57	60	53	57	62	61	52.0		
Carson	Maximum..	62	85	85	65	71	63	82	77	68	76	81	78	77	82	84	88	95	89	79	83	98	101	96	92	92	89	80	88	85	90	89	82.9	
	Minimum..	44	39	53	51	48	45	46	51	42	40	50	46	54	52	59	56	62	64	62	58	62	67	64	58	58	65	55	52	51	61	61	54.1	
Crosby	Maximum..	66	83	74	72	70	72	79	76	71	81	82	81	78	83	88	90	78	79	84	86	90	93	90	81	87	77	76	85	86	99	82	81.3	
	Minimum..	42	45	54	49	48	41	46	50	44	44	50	46	56	49	61	55	55	56	56	60	58	63	58	52	51	58	55	52	59	59	52	52.4	
Devils Lake	Maximum..	58	76	79	75	71	72	72	78	64	71	84	74	76	80	75	88	90	81	76	82	92	92	94	82	80	81	73	80	86	88	81	78.9	
	Minimum..	46	42	58	54	48	48	49	51	44	42	51	51	53	51	58	64	68	65	61	54	65	63	68	59	51	56	60	56	59	61	61	55.3	
Dickinson Airport	Maximum..	65	85	83	72	71	76	78	84	67	78	84	79	78	81	86	89	94	81	79	83	93	96	90	83	88	85	78	83	85	96	83	82.4	
	Minimum..	43	43	53	50	46	48	48	52	43	44	52	48	55	51	60	56	58	61	58	64	60	62	57	56	60	53	51	61	60	59	54	54.1	
Dunn Center	Maximum..	62	84	78	69	70	73	76	77	67	76	84	78	75	80	82	87	94	76	76	82	89	94	88	80	87	83	74	82	84	97	82	80.2	
	Minimum..	42	40	48	46	45	45	46	49	41	41	48	46	51	45	52	53	51	55	57	55	55	60	54	53	60	54	45	51	60	57	57	50.5	
Fargo Airport	Maximum..	62	73	80	83	76	79	80	82	68	72	83	75	76	82	83	87	82	86	79	86	90	92	96	89	79	79	76	79	80	88	91	81.1	
	Minimum..	49	40	55	55	53	47	48	48	47	41	52	54	55	51	58	63	65	66	65	61	64	64	66	64	61	59	59	55	57	63	62	56.4	
Fessenden	Maximum..	55	76	80	72	72	72	75	80	67	73	85	82	73	80	78	88	91	83	79	85	91	89	88	88	85	81	77	82	80	91	90	80.3	
	Minimum..	44	41	54	51	48	47	47	54	43	40	50	48	57	49	58	61	65	62	64	58	64	66	57	53	57	60	56	59	66	70	55.3		
Fullerton	Maximum..	71	77	83	81	75	78	80	86	71	74	88	79	75	80	81	90	84	91	83	85	93	93	97	90	83	85	76	80	84	90	90	83.0	
	Minimum..	46	39	55	52	51	48	49	51	47	42	50	53	55	48	55	62	67	67	68	63	65	67	64	66	57	59	61	53	53	61	68	56.2	
Garrison	Maximum..	62	84	77	75	73	75	77	83	69	79	86	79	76	77	79	90	92	79	81	82	91	94	91	84	85	84	79	83	85	94	83	81.5	
	Minimum..	44	42	54	51	48	46	45	51	44	42	50	49	57	50	60	57	59	62	63	57	62	66	65	57	56	62	60	50	56	59	56	54.2	
Golva	Maximum..	69	84	81	72	72	76	78	89	66	77	84	79	78	83	81	86	93	81	79	85	93	94	89	79	91	84	80	85	89	98	83	82.5	
	Minimum..	35	44	54	53	45	43	44	46	45	42	48	47	52	47	56	53	50	51	58	56	60	56	58	52	54	58	50	51	58	59	47	50.7	
Grafton	Maximum..	62	72	79	79	74	75	75	81	68	72	84	75	78	85	80	87	88	84	82	81	91	91	96	93	78	75	75	80	80	87	86	80.4	
	Minimum..	47	42	56	51	51	48	51	55	41	44	46	51	57	49	52	63	66	65	65	62	52	64	60	71	62	51	58	54	57	58	61	68	55.5
Grand Forks Airport	Maximum..	62	74	79	80	74	75	75	83	66	75	84	70	75	82	82	89	85	86	77	85	92	94	96	83	77	76	70	80	82	88	86	80.8	
	Minimum..	47	41	54	53	50	48	49	50	45	44	47	52	55	48	53	63	63	65	60	54	65	61	66	58	52	58	60	57	58	63	58	54.1	
Jamestown Airport	Maximum..	58	76	80	78	74	77	78	84	68	72	85	78	76	80	80	90	84	91	75	85	95	89	96	90	84	74	81	81	90	88	84	84.8	
	Minimum..	44	35	58	52	50	47	46	47	45	39	50	51	54	47	50	62	64	67	63	61	65	63	64	60	56	58	59	54	57	62	58	54.4	
Kenmare	Maximum..	65	83	78	76	73	75	80	78	72	79	83	80	78	80	84	91	87	78	84	85	93	97	92	84	86	80	77	86	84	96	81	82.8	
	Minimum..	42	48	54	53	49	47	49	55	45	45	55	48	58	55	62	58	56	57	58	61	63	67	71	56	53	61	60	55	62	65	58	55.8	
Langdon	Maximum..	64	72	81	77	73	74	76	78	64	71	81	78	78	79	74	84	88	84	83	80	88	89	90	84	78	76	75	79	79	86	84	78.2	
	Minimum..	44	38	52	48	43	44	50	51	38	40	47	48	49	44	54	62	61	66	59	49	63	57	64	54	47	56	60	49	57	60	65	52.2	
Marmarth	Maximum..	71	87	85	86	73	82	89	90	70	80	89	80	84	86	84	89	98	88	80	89	95	97	90	85	93	89	82	90	88	101	86	86.6	
	Minimum..	37	53	57	50	48	48	52	48	37	54	50	53	50	49	51	53	54	57	57	61	60	61	63	58	72	50	50	61	58	58	53.5		
Minot Airport	Maximum..	61	80	76	70	70	72	75	75	68	73	80	75	74	76	76	89	93	77	79	82	89	92	89	82	78	78	82	79	79	93	81	76.8	
	Minimum..	43	47	55	52	51	50	49	50	47	43	56	51	58	54	62	61	63	60	62	58	62	67	66	57	54	62	60	55	59	64	60	56.6	
Mott	Maximum..	67	86	86	75	73	78	82	87	69	78	88	80	77	82	86	91	95	81	77	85	94	99	90	86	90	86	78	85	82	98	85	83.1	
	Minimum..	43	44	54	53	46	47	43	51	45	41	52	58	51	47	58	58	60	62	56	64	69	64	56	58	64	55	67	60	62	60	55.5		
Pembina Airport	Maximum..	63	74	80	78	73	71	73	77	63	71	80	70	77	80	80	83	89	86	77	84	90	91	90	76	75	73	83	81	87	84	78.1		
	Minimum..	46	41	53	51	48	48	51	49	46	43	42	54	52	47	54	62	66	64	58	54	62	64	67	56	49	56	60	54	59	63	58	54.4	
Sharon	Maximum..	58	73	82	79	72	76	79	82	70	79	82	74	76	79	81	81	91	86	87	81	80	93	91	98	90	77	79	71	80	79	86	86	80.0
	Minimum..	45	38	56	55	50	47	46	47	44	39	53	52	53	52	60	61	65	65	61	58	65	64	60	53	56	61	57	58	60	68	55.5		
Steele	Maximum..	59	77	77	76	72	75	76	82	68	74	85	76	73	76	80	87	90	84	74	82	92	88	90	86	82	83	74	81	86	92	84	80.5	
	Minimum..	45	37	56	48	45	44	44	50	44	40	50	49	55	43	59	59	61	66	65	57	65	69	64	61	55	61	58	51	56	59	69	54.4	
Valley City	Maximum..	60	74	80	80	76	78	79	82	78	72	85	77	76	80	82	90	85	90	86	83	83	89	98	83	82	76	78	79	87	88	81.4		
	Minimum..	45	39	56	51	51	46	47	45	46	38	45	50	51	46	53	62	66	68	62	66	63	63	61	57	58	59	54	57	63	69	54.5		
Wahpeton	Maximum..	69	72	84	85	82	79																											

Daily Precipitation for July 1945

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James				.03	.06	.06			.27			.13	.11	.01		.19		.15	.21	.17	.04		.02			.95	.09					2.49
Cassellton	Red				.10	.10			.28	.02							.09	.02	.37	.02				.15			1.20	.30					2.65
Cooperstown	Sheyenne					.14			.11	.04		.07					.43		.21	.20							1.08	.59					2.87
Courtenay	James	.02		.05			.46		.80		.01		.10	.09			.10		.71	.31			.06				.93	.05					3.69
Devils Lake ^{1 5}	Devils Lake	T.	T.	.05	.56	T.	T.		.21			T.				.64	.01		.04	.45	.01			T.	T.		1.00	.01			.49		3.47
Edgeley	James				.04				.27				.37			T.	.26			.04							.38						1.36
Edmore	Devils Lake	.04		.08	.04				.25			.61					.33		.10	.26	.02						1.57	.19			.10		3.59
Ellendale	James					.27			.63				.12				.10		.19				.35				.04	T.					1.70
Fargo ^{1 5}	Red	T.		T.	.16	T.			.10			.03		.02			.02		.29	.01		T.		T.	T.		.55	.04			T.	T.	1.22
Forman	Sheyenne					T.			.06	.20			.16	.21			.08	T.	.02				.18				.38					.10	1.14
Fullerton	James					T.			.06	.05	.02	T.		.53			T.	.22	.03	.13	T.	T.	.55				.34	.13			.02	.03	2.08
Gackle	do				.06		.02		.46	T.		.06					T.	.20	.07	.28							.39	.09					1.89
Grafton	Red	.03		.29	T.	.02			.10	T.		.17		.02			.02	.22	.16	.42							.43	.08			.01		2.56
Grand Forks Airport ³	do	T.		T.	.93			.39		.23			.02		.07		.04				.44		.04					.60	.28		.06	.05	2.22
Hankinson ²	do					T.																					.10	.33					2.03
Hillsboro	Pembina			.10	.20	T.			.20	T.		.80				.30			.45	3.25							.59				T.		5.22
Jameson Airport ³	Red	T.		T.	.60				.09			.17		.04			.06		.66	.16			.08				.95	.02					2.74
Langdon	James			.12	.05				.47	T.		T.		.17			.28	1.10		.05	.10	T.					.36	.04			.33		2.78
Larimore	Pembina	.02			.06				.19	.02		.23					.28	.10		.05	.10						.76	T.			T.		2.06
Lisbon	Red				.20							.21		.03		.03		.05	.65	.13							.76	T.			T.		1.90
Mayville	Sheyenne				.02		.04		.18				.12	T.	.17		.05		.02				T.				1.32	.10					2.76
McHenry	Red			.01	.06	.18			.14			.12		T.			.02		.25	1.28	.01						.67	.01			.01		2.97
McLeod	James			T.	.18				.09	.04		.02				.04	.21		.68	.53							.83	.35					2.76
Oakes ²	Sheyenne								.38			.29							.05								.63	.08					1.43
Oakes ²	James							.09	.24			.25			.25		.11										.04			.03		.04	1.05
Park River	Red	T.	.39		.11				.41			.01		.04		.05	.38		.15	.39							.33	.03			.12		2.41
Pembina Airport ³	do	T.	.03		.21		.22	.01	.26			.47	.02	.29		.85	.54	T.	.02								.76	T.			T.		3.68
Petersburg	do			.02	.80	T.				.02		.46		.02			.17		.13	.28							.88	.45					3.23
Sharon	do			.39	.01	T.			.10	T.		.13					.03		.22	.26							1.44	.03			T.		2.61
Valley City	Sheyenne			.02	.07	T.			.09	T.		.05	T.	.07			.19		.09	T.							1.38	.38					2.34
Wahpeton	Red	T.		.27	.01	.05						.04	.63				.16		.03		.20						.59	.09	.15				2.22
Middle Division																																	
Ashley ³	Missouri	T.		.01	.01	T.	.09		1.11	T.				.19		.46			T.				T.	T.	.04		.01	.03			T.	.01	1.96
Bisbee	Devils Lake			.12	T.	.09			.50							.38	.64	.01	.07	.96							.66	.08			T.		3.51
Bismarck Airport ^{1 5}	Missouri	T.		.12	T.				T.	T.		T.		.24		.55		.08		.47		.52					T.						1.98
Bottineau ²	Mouse			.05		.24	.08	.01		.14							.03		.01		.11						.75	.08	T.			.72	2.22
Butte	do			.35	.12	.08			.05	.09		T.		.33		.09	T.		1.32	.10		.40					.53	.09			T.		3.55
Carson	Heart			.23	.08												.04		.67														1.02
Center	Missouri			.04												.35		.27	1.15		.55						.16				.04	2.56	
Drake ²	Mouse			.26	.13	.10	.15		.10	.10			.30		.09		.34	.14	.02	.73							1.15		.05		.08	3.74	
Dunseith	do	T.		.03	.14	.04	T.	.17	.21								T.		.65								.76	.06	T.		.65	2.06	
Eckman	do			.24	.20	.38			.10					.13		.07		.11		.49	.10						.37	T.			1.37	3.46	
Fessenden	James			.11	.48	.04			.04			T.		.06		.03	.50		.93	.47	.12						.52	.21	.20				3.71
Fort Yates	Missouri			1.45	T.	T.			.20					T.		.10			.32		.32		1.00	T.						.08			3.15
Foxholm	Mouse	.02			.20				.07	.30	T.		.01	.16	T.		.05		.32		.31	T.					.56		.01		.12	1.90	
Garrison ³	Missouri			.60	.04		.04		.10					.64		.05		.56	.21	.91		.31	T.				.03	T.			.06	3.24	
Granville	Mouse			.15	.29	.04			.27			.18		.16		.02		.60	.04	T.	.12						.22	.04			.04	1.67	
Hansboro	Devils Lake								.14					.16		.02		.67	.01								.78	.03			.04	2.17	
Linton	Missouri			.19	.49				.16					.35		.03		.21	T.	.07	1.43		.09				.79				T.	1.12	
Maddock	Sheyenne			.19	.44	.02			.15	.14		.09		T.	.23		.50		.05	.29	.32	.51					.79				T.	8.62	
Mandan ²	Missouri	T.		.04	T.	T.				T.				T.	.23		.50		.05	.29	.32	.51					.79				T.	1.94	
Max ²	do			.22	.75					.15				.30	.05	.12	.02		.42	.08	.58						.79						2.71
McClusky	do			.09	.06	T.						.07		.36		.19		.16	.81		.41	.19				.56	.09						2.99
Minot Airport ³	Mouse	T.		.14	T.	T.	.03		.41					.27		T.		T.	.92	.61							.70	.01			.02	T.	3.11
Mohall	do				.38				.08					.19		.15		.08		.39		.09					.21	.01			T.	.56	1.76
Napoleon ²																																	

1.05
NT
54^s

Not Heat

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OCT 19 1945

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIV BISMARCK, N. D., AUGUST 1945 No. 8

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Temperatures during August averaged near the normal at all stations. The highest temperatures occurred on the 17th or 18th, while cold periods occurred from the 1st to 7th and from the 20th to 25th. The precipitation was below normal in the eastern and western divisions and slightly above normal in the middle division. Heavy showers occurred at many stations on the 3-4th and 12-13th. August was a good month for growing crops and also for harvesting with an excellent small grain crop in prospect. Severe thunderstorms were reported in Morton County on the 30th and about the average number of hailstorms occurred. Corn had a late start but made excellent growth during the month. Pastures were mostly good.

TEMPERATURE

The mean temperature for the state was 67.1°, or 0.6° above the 1892-1945 average for August. The mean temperature for the eastern division was 67.3°; for the middle division, 66.9°; and for the western division, 67.0°. The highest mean temperature was 71.2° at Wahpeton, and the lowest, 63.2° at Cavalier, making a range in mean temperature of 8.0°. The absolute range was 73°, from 105° at Carson on the 18th, to 32° at Cavalier and Grafton on the 25th. The average daily excess in temperature for the state since January 1, 1945, is 0.7°.

PRECIPITATION

The average precipitation for the state was 1.68 inches, or 0.40 inch less than the 1892-1945 average for August. In the eastern division the average amount was 1.84 inches; in the middle division, 2.10 inches; and in the western division, 1.10 inches. The greatest monthly amount reported was 3.84 inches at Almont; the least, 0.16 inch at Bowman. The greatest amount recorded in any 24 consecutive hours was 2.26 inches at Rugby on the 4th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 2.26 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

(Dates and number of stations reporting)																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	...	4	6	3	17	1	8	9	11	4	7	8	2	4	1	...	1	...	1	1	6	2	...	3	...	1	3			
Lunar halos...																															
Solar halos ..																															
Hail											1							1													1
Thundersts.	6	14	14	...	1	...	1	8	10	10	9	16	2	1	1	9	3	7	...	8	1	3	10	6	...	2	26	21			

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck	30.37	21	29.61	26	9.5	34	se.	25	75	85	50	45	74	19
Devils Lake	30.33	21	29.62	27	7.2	19	w.	27	76	85	52	50	70	44
Fargo	30.36	22	29.63	31	10.5	29	w.	5	81	86	54	51	64	22
Williston	30.39	21	29.56	26	7.0	26	w.	27	62	77	43	36	85	38

† And other dates.

COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	67.3	105	24	2.86	2.80	1.50	2.39	0	8	15	10	6	
1893...	66.7	109	29	2.10	1.25	0.58	1.31	0	3	20	7	4	
1894...	68.8	102	30	1.37	0.86	1.20	1.14	0	4	17	11	3	
1895...	64.5	104	24	1.87	1.36	1.48	1.57	0	5	17	11	4	
1896...	64.7	107	21	2.07	0.86	0.42	1.12	0	5	17	10	4	
1897...	64.1	106	29	1.28	1.13	1.13	1.18	0	5	15	10	6	
1898...	65.4	104	24	2.92	1.40	0.75	1.69	0	5	15	11	5	
1899...	65.2	97	32	2.90	2.90	2.69	2.83	0	6	15	11	5	
1900...	70.4	114	33	6.05	4.53	4.60	5.06	0	10	14	11	6	
1901...	66.9	100	32	2.55	1.90	0.86	1.77	0	6	18	8	5	
1902...	64.3	96	26	2.65	2.36	1.88	2.30	0	8	16	9	6	
1903...	63.7	103	35	4.72	4.65	4.67	4.68	0	10	13	7	11	
1904...	63.3	102	31	1.56	1.92	1.34	1.61	0	6	17	7	7	
1905...	67.5	107	34	3.51	2.44	1.34	2.43	0	7	17	8	6	
1906...	66.3	105	31	1.53	1.74	2.25	1.84	0	7	17	6	8	
1907...	64.5	104	26	2.17	1.23	1.79	1.73	0	6	18	9	4	
1908...	63.2	104	25	2.48	2.46	1.55	2.16	0	7	17	8	6	
1909...	69.8	109	27	2.98	1.94	1.78	2.23	0	6	18	9	4	
1910...	63.1	109	24	1.58	1.30	1.51	1.46	0	5	14	8	9	
1911...	62.2	98	23	3.61	3.87	2.15	3.21	0	8	12	11	8	
1912...	63.4	118	32	3.41	2.60	2.62	2.88	0	10	11	10	10	
1913...	68.9	106	30	3.15	2.32	2.42	2.63	0	6	16	10	5	
1914...	64.2	101	26	2.00	2.26	2.61	2.29	0	7	13	11	7	
1915...	64.4	100	19	1.16	1.49	0.89	1.18	0	4	19	8	4	
1916...	66.0	100	26	3.17	2.79	2.05	2.67	0	8	16	10	5	
1917...	65.2	105	25	0.96	0.74	0.76	0.82	0	4	17	10	4	
1918...	66.5	102	34	3.51	3.39	3.25	3.38	0	8	15	11	5	
1919...	67.9	101	30	2.58	1.57	0.63	1.59	0	5	18	10	3	
1920...	68.8	108	28	1.03	2.01	1.55	1.53	0	5	22	6	3	
1921...	67.2	108	31	3.08	1.86	0.99	1.98	0	6	18	10	3	
1922...	69.8	115	33	1.29	1.63	1.02	1.31	0	6	18	9	4	
1923...	63.0	97	28	2.38	1.70	1.45	1.84	0	8	14	12	5	
1924...	63.8	102	28	2.27	1.36	1.09	1.57	0	6	17	9	5	
1925...	67.9	110	29	1.39	1.06	0.66	1.04	0	5	20	8	3	
1926...	65.6	105	36	3.01	2.41	1.68	2.37	0	7	14	8	9	
1927...	63.4	96	28	3.17	3.63	2.58	3.13	0	8	18	8	5	
1928...	64.8	105	25	3.84	3.15	2.28	3.09	0	8	17	9	5	
1929...	68.5	106	26	0.87	0.83	0.60	0.77	0	4	20	9	2	
1930...	70.4	104	32	1.40	1.45	1.49	1.45	0	6	15	9	7	
1931...	67.0	105	30	2.43	2.33	1.51	2.09	0	6	16	9	6	
1932...	68.3	100	28	2.40	1.37	1.89	1.89	0	7	16	10	5	
1933...	68.5	104	31	0.81	0.64	0.79	0.75	0	5	17	9	5	
1934...	67.4	108	25	1.70	1.15	0.60	1.15	0	5	16	11	4	
1935...	66.2	109	26	3.83	1.90	1.32	2.35	0	8	16	9	6	
1936...	69.8	110	29	1.67	1.37	1.16	1.40	0	6	14	11	6	
1937...	72.9	109	40	2.56	1.11	0.88	1.52	0	5	18	10	3	
1938...	69.8	109	33	1.79	1.22	1.48	1.50	0	6	18	10	3	
1939...	68.6	105	32	1.94	2.37	1.98	2.10	0	7	18	9	4	
1940...	67.8	103	33	3.12	1.77	1.25	2.05	0	7	18	7	6	
1941...	68.8	111	32	3.44	2.63	2.52	2.86	0	10	11	14	6	
1942...	66.3	105	33	4.69	2.48	2.10	3.09	0	9	12	12	7	
1943...	67.7	104	31	2.60	2.52	2.71	2.61	0	9	16	10	5	
1944...	65.6	102	34	7.06	3.64	2.42	4.37	0	11	13	11	7	
1945...	67.1	105	32	1.84	2.10	1.10	1.68	0	6	16	11	4	
Period	66.5	118	19	2.56	2.03	1.66	2.08	0	7	16	9	6	

NAT. HIST.

Climatological Data for August 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0 in. or more precip.	Clear	Pt. cloudy	Cloudy		Prevailing direction of wind
Eastern Division																				
Carrington	Foster	1,579	48	65.8	-1.3	100	18	41	25	0.70	-1.37	0.40	13	0	5	17	6	8	.....	Soo Line Agent.
Casselton	Cass	934	50	68.2	+1.1	98	17	40	25	2.14	-0.40	0.78	4	0	6	21	7	3	s.	C. Hayford.
Cavalier	Pembina	894	38	63.2	.....	102	18	32	25	1.43	-1.08	0.95	30	0	6	19	9	3	se.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	.....	.....	.....	.....	3.50	+1.02	1.10	12	0	8	17	12	2	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	68.0	+0.6	101	18	37	7	1.98	-0.63	0.95	4	0	5	16	9	6	nw.	R. J. Lockner
Courtney	Stutsman	1,523	15	.....	.....	.....	.....	.....	.....	2.05	-0.35	1.00	4	0	7	24	6	1	e.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	66.5	+1.7	98	18	43	25	1.75	-0.73	1.04	4	0	7	13	13	5	s.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	45	68.5	+0.8	102	17	37	25	1.86	-0.49	0.54	4	0	7	18	11	2	s.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	22	64.2	-0.6	99	17	35	25	1.37	-0.96	0.62	4	0	6	24	5	2	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	68.2	-0.5	99	17	39	25	2.20	-0.57	0.83	4	0	6	16	9	6	s.	J. E. Dummer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	65	68.3	+2.2	98	17	39	25	3.28	+0.39	1.03	12	0	5	12	12	7	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	54	69.1	+0.9	98	18	48	22	0.89	-1.86	0.38	4	0	7	23	5	3	s.	Helge Dyeste.
Fullerton	Dickey	1,439	48	69.4	+1.4	99	17	40	25	2.07	-0.47	1.37	3-4	0	5	14	12	5	s.	F. O. Alfin.
Gackle	Logan	1,951	15	67.6	.....	.....	.....	.....	.....	2.32	-0.03	1.18	4	0	8	12	13	6	se.	Mrs. Walter Kranzler.
Grafton	Walsh	827	54	68.0	+1.8	101	18	32	25	0.71	-1.81	0.23	31	0	8	19	7	5	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	55	67.5	+1.5	101	18	41	25	2.19	-0.43	0.55	31	0	14	15	8	8	n.	University of N. Dak.
Grand Forks Aprt. 2 1/2 mi. W	Grand Forks	834	5	67.0	.....	.....	.....	.....	.....	2.13	.....	0.58	11	0	11	13	9	9	n.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	68.2	-2.5	98	18	39	26	1.10	-1.65	0.44	31	0	5	13	7	11	se.	Soo Line Agent.
Hannah	Cavalier	1,568	52	68.6	-0.5	95	17	40	25	3.48	+1.11	2.20	4	0	7	4	17	10	sw.	A. E. Prior.
Hillsboro	Trall	901	40	68.0	-0.2	97	17	41	25	2.80	+0.05	1.43	13	0	8	11	14	6	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	54	67.9	+1.0	100	18	37	25	3.06	+0.51	1.29	4	0	8	9	13	e.	N. Dak. State Hospital.	
Jamestown Airport, 2 mi. NE	Stutsman	1,494	5	67.4	.....	.....	.....	.....	.....	2.53	.....	1.07	4	0	7	13	13	5	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	66.2	.....	.....	.....	.....	.....	2.18	.....	0.50	4	0	7	9	16	6	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	50	64.8	-1.1	98	17	38	21	1.71	-0.76	0.53	4	0	8	12	13	6	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	53	68.4	+2.5	100	17	38	25	1.11	-1.60	0.31	13	0	6	18	6	7	nw.	Chas. Ouradnik.
Lisbon	Ransom	1,091	42	67.8	0.0	98	18	39	25	0.71	-2.19	0.35	5	0	7	16	5	10	nw.	J. O. Halverson.
Mayville	Trall	975	50	69.8	+1.9	98	17	46	25	2.34	-0.21	1.00	13	0	8	12	11	8	sw.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	23	65.0	-0.7	97	17	38	25	0.74	-1.58	0.21	13	0	7	15	11	5	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	34	70.5	+2.0	98	18	38	25	0.50	-2.20	0.35	4	0	4	23	5	3	sw.	J. G. Carlson.
McVille	Nelson	1,467	4	.....	.....	.....	.....	.....	.....	1.13	.....	0.50	4	0	5	8	18	5	sw.	A. M. Casad.
Milnor	Sargent	1,117	13	67.4	.....	.....	.....	.....	.....	2.28	-0.45	0.65	12	0	7	21	8	2	sw.	E. W. Wilson.
Oakes	Dickey	1,318	17	67.6	-1.5	98	18	39	25	0.79	-1.88	0.47	4	0	8	9	20	2	se.	F. H. Murray.
Park River	Walsh	996	42	66.5	-0.1	101	17	35	25	0.55	-1.75	0.14	4	0	8	21	7	3	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	72	65.8	+1.1	100	17	40	25	3.00	+0.71	2.16	31	0	8	7	16	8	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	15	66.2	.....	.....	.....	.....	.....	1.25	-1.11	0.35	4	0	8	18	11	2	w.	T. C. Overland.
Sharon	Steele	1,516	22	67.1	-0.8	96	18	45	25	3.16	+0.79	1.33	9-10	0	11	12	16	3	sw.	Nels O. Grefshelm.
Valley City	Barnes	1,229	41	67.6	-0.1	95	17	37	25	3.29	+1.01	0.91	4	0	9	13	13	5	nw.	Earl H. Kruschwitz.
Wahpeton	Richland	962	54	71.2	+2.5	98	18	41	25	0.83	-2.04	0.40	4-5	0	7	19	8	4	nw.	W. J. Cavanaugh.
Average for Eastern Division				67.3	+0.3	102	18	32	25	1.84	-0.72	2.20	4	0	7	16	10	6	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	50	67.1	-0.1	97	17	39	25	1.33	-1.11	0.53	4	0	10	13	11	7	s.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	1	62.2	.....	.....	.....	.....	.....	2.06	.....	1.82	4-5	0	5	19	3	9	s.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	43	66.8	+1.1	98	18	36	25	2.76	+0.41	1.19	4	0	7	21	6	4	nw.	Robert L. Peterson.
Bismarek	Burleigh	1,670	71	69.0	+0.8	95	17	43	22	3.36	+1.73	1.54	13	0	7	11	17	3	nw.	U. S. Weather Bureau.
Bismarek Airt. 2 1/2 mi. SE	Burleigh	1,650	6	68.8	+2.1	98	18	45	22	2.76	+0.94	1.56	13	0	8	11	17	3	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	54	64.6	-0.3	95	18	39	20	2.19	-0.26	1.81	3-4	0	9	17	5	9	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	21	65.8	-1.4	98	18	44	25	1.71	-0.23	0.82	13	0	7	20	6	5	se.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	34	69.1	+0.5	105	18	42	21	2.24	+0.58	1.80	13	0	3	17	10	4	se.	J. W. Evans.
Center	Oliver	2,100	8	65.4	.....	.....	.....	.....	.....	2.16	.....	1.00	30-31	0	6	14	13	4	nw.	Fred L. Hofuz.
Drake	McHenry	1,634	16	67.2	-0.4	96	17	40	20	2.06	+0.04	0.85	13	0	7	23	7	1	s.	Geo. A. Paulus.
Dunsmuir, 2 miles NNE	Rolette	1,682	50	65.4	+0.8	93	18	42	22	1.94	-0.42	1.69	4	0	5	13	7	11	w.	State Tuberculosis San.
Eckman	Bottineau	1,500	40	64.6	-0.4	96	17	38	20	1.32	-0.56	0.93	3-4	0	11	14	12	5	se.	E. R. Sherman.
Fessenden	Wells	1,610	34	67.8	+1.1	99	18	40	24	1.33	-0.85	0.44	4	0	7	14	14	3	w.	John V. Zuber.
Fort Yates	Sioux	1,670	46	69.3	-0.4	98	17	38	22	1.76	-0.13	0.50	4	0	6	25	4	2	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,657	25	67.0	+0.4	98	17	41	25	0.98	-1.00	0.45	12	0	5	19	8	4	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	69	67.1	+0.5	98	18	41	21	1.08	-0.86	0.48	13	0	6	13	12	6	se.	Mae H. Vorachek.
Granville	McHenry	1,504	39	66.2	+0.5	95	18	40	25	2.76	+0.89	1.20	12-13	0	11	23	7	1	sw.	Fred Roble.
Hansboro	Towner	1,597	38	63.4	-0.1	95	17	35	24	1.58	-0.74	1.24	3-4	0	7	17	9	5	nw.	W. E. Disher.
Harvey	Wells	1,596	43	.....	.....	.....	.....	.....	.....	1.52	-0.67	1.05	4	0	4	10	20	1	nw.	H. J. Reynolds.
Leeds	Benson	1,515	5	65.9	.....	.....	.....	.....	.....	1.86	.....	1.33	4	0	5	12	12	7	w.	John Dulmage.
Linton	Emmons	1,711	29	69.4	-0.7	99	17	40	22	2.22	+0.14	0.78	3	0	8	13	10	8	se.	Wm. Heferman.
Maddock, 1 mile E	Benson	1,604	31	66.7	+0.2	99	18	37	25	1.73	-0.58	0.83	4	0	8	8	16	7	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	32	68.8	-0.1	97	17	44	22	3.36	+1.90	1.78	13	0	8	15	8	8		

Climatological Data for August 1945-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Cou.																				
Elbowoods	McLean	2,082	53	67.2	−0.7	100	18	34	20	1.22	−0.62	0.51	13	0	4	21	8	2	nw.	H. W. Case.
Epping	Williams	2,224	37	68.5	+1.0	100	17	39	20	0.54	−1.10	0.24	3	0	4	23	7	1	nw.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	17							0.90	−0.68	0.66	12-13	0	3	23	4	4	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	28	67.8		98	18	41	22	1.56	−0.25	1.34	12-13	0	4	18	10	3	se.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	5	64.7	−2.5	99	18	36	20†	0.85	−0.75	0.57	8-9	0	6	14	14	3	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	68.0	+2.4	100	17	41	14	0.26	−1.24	0.24	12	0	3	22	9	0	se.	L. D. Nielson.
Halliday	Dunn	2,073	4							1.97		1.53	13	0	4	14	15	2	sw.	John Kisse.
Hettinger	Adams	2,675	39	68.3	−0.6	102	18	38	21†	1.22	−0.32	0.60	26	0	5	20	10	1	nw.	Edgar Martin.
Kenmare	Ward	1,799	14	67.6	+1.6	97	17†	40	24	0.98	−0.93	0.50	12	0	4	20	6	5	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	68.5	+0.3	101	18	37	21	0.87	−0.75	0.60	13	0	4	19	8	4	s.	S. P. Grane.
Medora	Billings	2,271	31							0.80	−0.72	0.40	30	0	4	27	1	3	.....	Harry Roberts.
Mott	Hettinger	2,424	39	68.3	+0.3	102	18	40	21†	1.06	−0.70	0.59	9	0	5	10	12	9	se.	Northern Pacific Agent.
New England	Hettinger	2,621	54	69.1	+1.3	102	18	39	22	1.24	−0.34	0.82	12-13	0	8	16	12	3	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		4	65.6		93	18	37	20	1.33		0.90	3	0	4	22	6	3	sw.	Peter F. Pieck.
Parshall	Mountrail	1,929	31	67.0	+1.0	100	18	34	20	0.32	−1.52	0.15	13	0	4	9	22	0	sw.	C. E. Shubert.
Portal	Burke	1,954	32	65.2	+0.4	98	18	35	24	1.79	−0.17	1.31	3-4	0	5	17	9	5	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	65.8	0.0	98	18	37	20	0.92	−0.76	0.32	13	0	5	16	11	4	se.	E. J. Lewis.
Richardton, 1 1/2 miles N.	Stark	2,467	30	67.4	−1.1	94	17	44	20	3.28	+1.44	1.66	2-3	0	4	15	10	6	se.	Assumption Abbey.
Ryder	Ward	2,108	17							0.99	−1.08	0.39	12	0	5	20	7	4	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	65.0	−2.6	101	18	36	20†	0.91	−0.69	0.29	14	0	5	14	17	0	.....	H. J. Bugge.
Stanley	Mountrail	2,258	8	64.8		99	17	37	22	1.26		0.72	30	0	4	14	13	4	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	17							0.61	−1.17	0.25	12-13	0	5	18	9	4	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	17							0.43	−1.32	0.18	11	0	4	8	17	6	nw.	Morris J. Pederson.
Trotters	Golden Valley		20							1.14	−0.40	0.67	2	0	5	9	21	1	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	69.9		102	18	36	22	0.27		0.19	13	0	3	11	12	8	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	67.8	−0.5	99	18	37	21	0.70	−0.90	0.43	13	0	5	22	7	2	w.	J. C. Zeller.
Wildrose	Williams	2,258	16							0.42	−1.39	0.18	12	0	5	29	2	0	nw.	Jonathan Winkler.
Williston	Williams	1,878	67	67.8	+1.7	98	18	44	14	0.33	−1.14	0.21	2-3	0	6	11	14	6	se.	U. S. Weather Bureau.
Average for Western Division				67.0	−0.1	102	18	34	20	1.10	−0.56	2.08	3	0	5	17	11	3	nw.	
Average for the State				67.1	+0.6	105	18	32	25	1.68	−0.40	2.26	4	0	6	16	11	4	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

* Best available used for stations not equipped with recorders.

Daily Temperatures for August 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum...	85	82	74	78	78	73	74	80	79	81	91	85	79	74	84	93	97	96	95	74	78	79	81	72	79	91	86	90	83	87	82	82.6	
	Minimum...	45	48	56	58	54	54	45	52	60	57	49	57	57	48	50	57	62	58	50	44	40	47	42	39	57	54	47	54	55	57	51.6		
Bismarck Airport	Maximum...	81	82	80	83	78	74	78	84	86	81	84	86	75	76	85	91	95	98	85	71	78	80	88	72	80	88	85	90	80	93	86	83.0	
	Minimum...	48	53	59	59	54	55	47	54	53	63	57	59	57	56	53	56	63	61	60	50	48	45	55	52	48	55	57	50	51	57	61	54.7	
Bottineau	Maximum...	78	79	78	73	71	68	75	81	79	74	74	80	74	72	84	86	89	95	73	70	76	79	83	71	75	80	84	80	76	80	79	77.9	
	Minimum...	47	50	55	55	51	55	50	52	57	59	55	55	58	46	49	57	51	57	60	39	43	49	52	41	44	53	44	51	51	54	53	51.4	
Carson	Maximum...	85	86	84	87	80	80	80	82	91	86	87	88	75	78	88	93	102	105	83	70	80	80	90	72	80	86	86	92	81	96	88	85.2	
	Minimum...	48	57	58	61	51	48	48	55	57	57	54	55	55	51	55	55	60	60	58	45	42	47	50	51	48	54	55	50	49	55	54	53.0	
Crosby	Maximum...	81	82	72	77	67	74	77	84	82	83	76	81	73	77	86	94	94	97	72	69	80	82	86	74	75	78	83	84	72	83	79	79.8	
	Minimum...	49	45	59	57	54	50	47	55	60	60	59	55	54	40	46	53	55	55	57	45	42	42	47	41	42	48	43	54	50	47	50	50.4	
Devils Lake	Maximum...	78	75	77	64	73	72	75	81	69	78	82	80	76	71	84	93	97	98	89	73	76	80	85	70	74	84	84	81	76	78	79	79.1	
	Minimum...	53	50	56	56	56	55	50	52	59	61	60	54	60	49	52	62	61	63	56	46	47	46	50	46	43	54	55	53	51	54	60	53.9	
Dickinson Airport	Maximum...	82	83	83	81	75	76	79	80	87	86	81	84	71	76	86	91	95	98	76	67	73	78	89	72	76	80	84	88	79	92	86	81.7	
	Minimum...	49	51	60	58	52	48	47	57	58	58	56	54	55	52	53	56	61	60	51	43	39	42	50	50	48	55	53	51	48	51	57	52.4	
Dunn Center	Maximum...	81	83	80	80	72	74	79	80	86	83	77	85	73	74	82	90	95	96	75	62	74	77	88	70	78	79	82	87	77	89	84	80.4	
	Minimum...	43	45	49	58	50	49	40	42	55	57	51	52	55	47	46	51	53	51	52	38	40	38	40	49	46	50	47	48	47	48	47	47.9	
Fargo Airport	Maximum...	84	78	78	69	80	75	77	81	72	79	88	80	73	72	84	90	98	97	94	76	75	79	80	71	75	90	84	82	78	79	74	80.4	
	Minimum...	55	56	52	56	62	57	57	53	62	62	56	62	61	54	51	60	60	65	60	57	54	46	52	49	39	62	60	57	55	52	58	56.2	
Fessenden	Maximum...	80	78	76	74	72	69	74	83	78	88	88	85	75	73	84	93	95	99	93	74	77	77	84	83	80	87	85	84	79	86	82	81.8	
	Minimum...	52	49	58	56	55	46	47	49	60	61	58	55	60	48	49	60	65	51	62	43	44	46	55	40	44	73	57	53	48	55	58	53.8	
Fullerton	Maximum...	86	83	75	75	80	74	76	79	74	81	87	85	77	76	84	92	99	96	94	89	78	77	80	74	75	91	85	84	82	82	83	82.4	
	Minimum...	52	54	57	58	56	57	51	51	61	59	56	60	66	57	51	59	63	64	68	53	54	45	45	55	40	60	59	56	58	53	65	56.4	
Garrison	Maximum...	83	82	76	82	73	75	78	84	88	83	78	84	73	78	86	92	97	98	77	68	80	80	90	74	77	86	85	90	78	89	84	82.2	
	Minimum...	48	49	55	61	55	52	45	52	61	62	55	52	59	47	48	55	58	56	54	42	41	43	53	47	41	54	49	56	50	57	56	52.0	
Golva	Maximum...	83	85	87	79	75	75	81	83	85	88	80	85	72	78	88	93	96	99	78	63	73	81	91	74	82	78	84	87	82	95	93	83.0	
	Minimum...	41	41	59	48	46	40	37	52	57	56	52	52	44	44	50	51	46	46	36	38	36	45	41	52	46	45	42	50	42	50	46	46.4	
Grafton	Maximum...	84	79	77	74	75	75	80	81	79	78	86	78	78	77	85	94	98	101	97	81	76	79	82	82	75	87	86	83	77	77	74	81.8	
	Minimum...	56	51	49	57	59	62	51	50	56	62	52	60	63	50	48	61	57	63	67	51	50	41	48	50	32	56	60	52	52	49	61	54.1	
Grand Forks Airport	Maximum...	82	76	78	66	75	74	79	82	75	78	87	79	75	69	84	90	99	99	92	78	75	80	82	72	75	88	84	80	77	77	74	80.4	
	Minimum...	53	49	49	58	60	58	54	51	57	62	57	56	58	51	48	61	58	62	64	51	48	43	47	47	38	57	59	52	53	53	56	53.9	
Jamestown Airport	Maximum...	85	80	76	66	75	73	74	80	75	78	87	81	79	75	84	91	96	99	90	75	79	80	82	73	75	88	85	79	84	83	81	81.0	
	Minimum...	52	52	56	56	58	55	49	50	61	59	54	60	62	54	47	58	56	63	60	51	51	42	48	47	39	54	58	55	49	53	59	53.8	
Kenmare	Maximum...	80	82	78	77	78	75	80	85	87	82	75	85	73	76	89	95	97	97	70	69	80	79	90	75	78	84	83	85	75	81	81.2		
	Minimum...	54	49	58	57	56	53	49	55	60	63	59	56	58	45	54	62	62	61	62	47	47	51	57	40	49	50	49	58	47	52	54	54.0	
Langdon	Maximum...	77	77	78	71	72	73	78	78	76	76	71	83	80	76	73	83	91	98	98	90	76	77	80	83	78	74	83	80	76	76	75	74	79.2
	Minimum...	51	45	48	51	56	56	54	52	55	59	57	50	59	44	45	54	57	55	64	40	38	45	41	45	40	53	48	45	47	49	51	50.2	
Marmarth	Maximum...	84	84	84	84	80	78	84	86	90	91	87	87	84	77	87	92	93	101	85	64	76	81	83	84	84	82	84	89	100	88	85	85.2	
	Minimum...	64	54	64	61	48	41	49	59	57	56	51	55	60	47	49	57	53	49	56	42	37	40	43	50	54	50	52	40	54	57	57	51.8	
Minot Airport	Maximum...	80	80	73	78	73	70	75	85	84	78	73	81	73	74	85	92	95	98	76	68	78	80	88	71	76	86	85	83	75	86	83	80.7	
	Minimum...	51	53	56	54	53	54	49	53	59	61	58	55	54	47	50	60	63	62	52	46	49	51	54	47	47	55	50	53	50	52	55	53.3	
Mott	Maximum...	82	85	83	84	77	77	80	79	85	85	85	85	78	78	87	92	98	102	85	67	76	79	82	77	76	84	84	98	82	95	88	83.5	
	Minimum...	51	51	60	62	49	58	48	58	58	57	57	57	56	48	57	58	62	50	55	53	40	40	50	44	53	50	54	45	52	56	62	53.1	
Pembina Airport	Maximum...	78	72	81	71	74	71	85	82	75	77	83	82	76	67	83	90	100	98	92	75	73	80	83	70	74	84	81	72	74	72	78	78.8	
	Minimum...	57	51	49	56	58	59	64	49	57	60	56	53	57	49	43	55	55	60	62	52	47	45	48	49	40	53	55	52	53	51	56	52.9	
Sharon	Maximum...	80	78	78	70	73	74	78	79	71	76	84	80	74	72	82	87	91	95	96	88	76	77	79	80	72	74	87	82	84	77	80	79	79.4
	Minimum...	50	50	54	53	59	58	54	54	57	60	60	58	62	52	48	62	58	60	69	48	46	49	52	49	45	54	58	52	52	54	61	54.8	
Steele	Maximum...	80	80	74	79	75	72	73	80	83	80	86	80	78	72	84	88	93	96	85	73	76	78	83	73	75	85	83	87	77	90	82	80.0	
	Minimum...	47	52	60	58	54	54	48	52	60	60	58	58	59	52	51	58	58	60	67	48	44	44	52	62	40	51	55	48	48	54	59	53.8	
Valley City	Maximum...	82	79	75	73	78	74	74	79	71	76	86	78	75	72	83	89	95	95	92	83	76	79	79	77	74	86	80	81	76	80	77	79.7	
	Minimum...	51	54	56	56	61	58	61	58	60	55	61	64	56	46	62	58	59	70	53	52	44	50	52	37	57	59	56	52	55	63	55.5		
Wahpeton	Maximum...	93	87	82	78	86	84	78	8																									

Daily Precipitation for August 1945

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James Red.					.19					.06	.01		.40								.27						.07			.03	0.70		
Casselton	James Red.				.78		T.				.06		.60	.40																	.03	2.14		
Cooperstown	Sheyenne				.95	T.	T.				T.	T.	.19	.27							T.	.27							.12	.45	1.98			
Courtenay	James			.02	1.00							.09		.72													.04				.15	2.05		
Devils Lake ^{1 5}	Devils Lake				1.04	.02	T.					.07	T.	.03					.08						T.		.08			.43	T.	1.75		
Edgeley	James			.10	.54	.03					.54											.20								.23	.22	1.86		
Edmore	Devils Lake				.62	.04																			T.	.05		.10		.04	.52	1.87		
Ellendale	James			.22	.83						.34			.09							.62	T.								T.	.10	2.20		
Fargo ^{1 5}	Red.	T.		T.	.64		T.			T.	.07	T.	1.03	.73							.85	T.			T.		T.	T.			.03	.38		
Forman	Sheyenne				.38		T.				.05		.03	.28																	.03	.05	.89	
Fullerton	James			.10	1.27						.09							T.			.40	T.									T.	.21	2.07	
Gackle	do			.34	1.18								.34	.21						.01									.10		.01	.13	2.32	
Grafton	Red.					.08	T.						.09	.07								.12					.07	T.	.02	.03	.23	.07		
Grand Forks Airport ³	do				.27	.05	.02						.58	.34				T.	.08									.05	.05		.13	.51	2.13	
Hankinson ²	do				T.	.39					T.		.02		.19																.44	1.10		
Hannah	Pembina			.20	.20	.10						.08																		.20	.15	.55	3.48	
Hillsboro	Red.				.53	.03	T.			T.				.94								.39						T.	.05	.11	T.	.06	2.80	
Jamestown Airport ³	James			.25	1.07					.14	.07		.01	.04	.94							.02						T.	T.	T.		.17	.53	1.71
Langdon	Pembina				.53	.15	.06							.03														.23			T.	.17	.53	1.71
Larimore	Red.					.27								.31																.12	.22	1.11		
Lisbon	Sheyenne	T.		.02	.35						.01		.14	.12	.04						.04								.15		.03	.07	1.08	
Mayville	Red.			.52		.06						.30	1.00									.22							.20		.02	.02	2.34	
McHenry	James			.19							.05	.12	.12	.21															.10		.05	.02	.74	
McLeod	Sheyenne			.02	.35						T.	.05	.08		.12																		.06	.79
Oakes ²	James				.13	.34		.01			.10				.12							.02	.01									.06	.06	.55
Park River	Red.			.14	.06	.04						T.		.03								.16			.10		.07		.18			.06	.30	
Pembina Airport ³	do				.05	.04	.11					.25		T.																	.05	.2	1.16	
Petersburg	do				.35	.02						.11		.19															.12	.02	.35	.09	1.25	
Sharon	do				.76	.02	T.				1.33	T.	.20	.36						.04	.02							.13	.07	.03	.20	3.16		
Valley City	Sheyenne			.13	.91	T.	.04			T.			.51	.74							.10	.79				T.		T.	.04		.03	.32	3.29	
Wahpeton	Red.			.20	.20	.03							T.	.18								.02									.16	.04	0.83	
Middle Division																																		
Ashley ³	Missouri			.18	.53					.01				.20	.01			.11		.06	.05						T.	.03			.15		1.33	
Bisbee	Devils Lake				1.99	.06							.04	.02														.33			.26	.06	2.76	
Bismarck Airport ^{1 5}	Missouri			.30	.16					.46	.05			1.56		T.		T.										T.	.04	.05		.14		2.76
Bottineau ²	Mouse				1.81	.05	.04	T.				.03		.02	.01														.03		.06	.14	2.19	
Butte	do			T.	.42						.22	T.		.02	.02				T.	.12	T.								.02		.09		1.71	
Carson	Heart										.06			1.80															.38				2.24	
Center	Missouri			.34	.21									.45							T.	T.							.12	.04		1.00	2.16	
Drake ²	Mouse				.61		.11				.30		.07	.85						T.	.04	T.							T.		.06	.09	2.06	
Dunseith	do				1.69						.04	.03	.02	.02	.05							T.								T.		.05	.09	1.94
Eckman	do			.02	.93	.06					.07	.02	.02	.41				.14			T.							.03		.12	.10	.07	.08	1.32
Fessenden	James				.44	T.						.07		.35																			.05	1.33
Fort Yates	Missouri			.43	.50					T.	.15			.35								T.								.12	.18	.15	1.76	
Foxholm	Mouse			.18		T.	.07				.05	.05	.45									T.										.23	.09	0.98
Garrison ³	Missouri			.12	.15						.18			.48											.06						.09		1.08	
Granville	Mouse			.15	.30	.01	.08				.30	T.	.55	.65	.01				.15									T.			.02	.04	2.76	
Hansboro	Devils Lake				1.24	.06	.01				.01	.05		.18	.05						.18		T.	.04					.28	T.	.11	.10	1.58	
Linton	Missouri			.78	.60						.11			.05																			2.22	
Lubbock	Sheyenne				.83						.40	T.		.05				.03		.09									.16		.13	.04	1.73	
Mandan ²	Missouri			.38	.16						.52			1.78	.39														.09	.08	.08	.38	3.48	
Max ²	do	T.			.53									.36	.07																.07	1.03		
McClusky	do			.07	.10	T.					.83			.80															.16	.04	.18	.22	2.22	
Minot Airport ³	Mouse			.30	.31	.03	T.			.06				.35	T.				.02												.01	.08	T.	1.16
Monell	do			.22	.18	.04					.12	.06	.04	.23																		.69	1.65	
Napoleon ²	Missouri			.17	.49						T.			.25	.06	.01																.18	1.30	
New Salem	Heart			1.04							.09			1.84	.18																	.21	3.51	
Pettibone	James			.21	.26	T.						.04		1.67	.03														.02	.07	.08		2.42	
Rolla	Devils Lake				1.44	.07	T.				.02	.08	.02								T.								.02		.08	.10	1.83	
Rugby	Mouse				2.26	T.					.02	T.		.38																	T.	T.	2.66	
Selfridge	Missouri	T.		.30	.95					.20				.25								T.								.05	.15	.20	2.30	
Steele	do			.50	.62	T.					.02	T.	.10	.74	.04														.10	.08	.13	2.33		
Towner	Mouse				1.85		T.				.62			.27							.11										.04		3.00	
Turtle Lake	Missouri			.08	.22	.07					.20			1.00		.72														.05	.08	.24	3.02	
Tuttle	do			.26	T.						.16	.14		2.20	.04														.13		.07	.30	3.44	
Underwood	do			.18	T.	.05					.11	.13	T.	.53						T.		T.							.20			.12	1.20	
Velva	Mouse			.07	.67	T.	.05				1.27	T.		1.38	.01						.01										.04	.07	3.57	
Washburn	Missouri			.23	.56	.06					.36	.13		1.18	.08															.16		.17	2.93	
Westhope	Mouse			.75	.08						.01	.02	.01																	.05		.01	.60	1.49
Willow City	do				2.06	.05						.13	.05								.01									</				

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

1 Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 10-11-45-1050]

1.05
NT
59⁷

Not Heat

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIV BISMARCK, N. D., SEPTEMBER 1945 No. 9

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Unusually warm weather prevailed during the first week of September, but temperatures were below normal on nearly all days after the 8th. It was a month featured by extremes of temperature. Many stations recorded the highest readings of the year on the 5th. Some stations had the first killing frost of the season on the 15th and all places had killing frost before the close of the month. Precipitation was heavy in all eastern and some central counties and slightly above normal in the western section of the state. The precipitation interfered with harvesting and threshing but it was beneficial to late crops and pastures. Some corn was damaged by the freeze during the last half of the month, but as a rule crops of all kinds were good to excellent.

TEMPERATURE

The mean temperature for the state was 54.5°, or 2.3° below the 1892-1945 average for September. The mean temperature for the eastern division was 54.8°; for the middle division, 55.4°; and for the western division, 53.2°. The highest mean temperature was 58.4° at Casselton and Wahpeton, and the lowest, 50.0° at Dunn Center, making a range in mean temperature of 8.4°. The absolute range was 89°, from 103° at Linton on the 5th, to 14° at three stations on the 28th and 29th. The average daily excess in temperature for the state since January 1, 1945, is 0.3°.

PRECIPITATION

The average precipitation for the state was 2.14 inches, or 0.59 inch more than the 1892-1945 average for September. In the eastern division the average amount was 3.18 inches; in the middle division, 1.73 inches; and in the western division, 1.50 inches. The greatest monthly amount reported was 5.87 inches at Pembina; the least, 0.75 inch at New Hradec. The greatest amount recorded in any 24 consecutive hours was 3.58 inches at McVille on the 7-8th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 1.67 inches.

MISCELLANEOUS PHENOMENA
(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	2	4	..	2	2	3	6	11	3	7	8	9	2	7	2	2	4	1	..	2	15	1	1	..	2	..	4	5	..	..	..
Lunar halos ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Solar halos ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hail	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thundrstm. ..	1	1	..	1	1	3	9	4	5	2	2	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..

NOV 23 1945

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.53	28	29.41	22	11.1	38	nw.	9	79	85	55	55	55	330
Devils Lake...	30.56	28	29.48	22	8.4	31	nw.	10	78	86	60	61	43	390
Fargo	30.55	28	29.54	10	12.5	37	w.	9	83	87	59	63	49	313
Williston.....	30.54	28	29.35	22	7.5	30	nw.	9	69	81	53	46	57	404

† And other dates.

COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	59.2	101	24	1.08	1.05	0.40	0.84	0	4	16	7	7	5
1893...	57.1	102	8	0.75	0.75	0.94	0.81	0.1	4	18	7	7	5
1894...	58.2	104	18	1.06	1.67	1.42	1.38	0	5	15	7	7	8
1895...	56.6	100	12	1.29	0.61	0.42	0.77	0	4	12	12	6	6
1896...	53.0	98	11	2.25	2.00	0.57	1.61	0	6	12	8	10	10
1897...	64.1	109	18	0.24	0.25	0.35	0.23	0	2	20	7	3	3
1898...	56.8	98	10	1.85	1.00	0.90	1.25	0	4	14	9	7	4
1899...	55.0	101	11	0.60	0.57	0.57	0.58	T.	3	17	9	4	7
1900...	54.6	98	17	5.15	5.26	4.44	4.95	T.	8	12	7	11	11
1901...	53.6	100	12	2.41	1.80	1.82	2.01	T.	7	10	8	12	12
1902...	53.6	95	15	1.24	0.54	0.44	0.74	0	4	16	8	6	6
1903...	51.6	90	18	3.36	2.85	2.77	2.99	0.7	7	12	6	12	12
1904...	54.7	96	18	2.12	1.18	1.00	1.43	0	5	14	7	9	9
1905...	59.8	104	23	1.62	1.65	1.74	1.67	0	5	16	8	6	6
1906...	62.8	109	20	1.54	0.73	1.07	1.11	0	4	19	6	5	5
1907...	52.1	96	9	2.39	1.11	0.68	1.39	T.	6	14	8	8	8
1908...	60.7	104	16	0.87	0.89	1.97	1.24	0.2	4	17	7	6	6
1909...	59.0	93	24	1.03	0.77	1.04	0.95	0	4	16	8	6	6
1910...	55.3	99	18	2.38	1.88	1.10	1.79	0.1	4	14	7	9	9
1911...	54.9	95	21	2.32	2.41	2.38	2.37	T.	8	12	8	10	10
1912...	51.5	101	18	3.54	2.50	1.82	2.62	0	10	11	6	13	13
1913...	57.2	108	8	2.39	1.47	1.37	1.74	0.4	6	16	8	6	6
1914...	59.3	98	25	1.24	1.00	0.84	1.03	0	5	16	8	6	6
1915...	54.6	104	23	2.42	2.60	1.94	2.32	0	9	10	8	12	12
1916...	55.1	99	15	2.12	1.07	1.10	1.43	T	6	14	9	7	7
1917...	56.4	97	16	1.53	0.93	0.65	1.04	0	5	12	9	9	9
1918...	51.9	93	11	0.46	0.40	0.33	0.40	T.	3	15	9	6	6
1919...	58.6	100	20	0.92	1.05	0.86	0.94	0.3	5	12	10	8	8
1920...	59.0	99	19	3.94	1.19	1.49	2.21	T.	8	15	9	6	6
1921...	57.0	101	25	3.91	3.37	2.34	3.21	T.	12	12	10	8	8
1922...	59.8	104	23	2.42	2.00	1.89	2.10	0	6	16	8	6	6
1923...	60.1	99	15	2.04	2.25	3.25	2.51	0	6	14	8	8	8
1924...	55.0	98	20	3.68	1.91	0.68	2.09	T.	7	15	7	8	8
1925...	58.1	103	20	4.18	2.23	1.61	2.67	T.	8	12	8	10	10
1926...	52.3	95	9	2.80	2.44	1.66	2.30	0.5	9	11	9	10	10
1927...	56.8	101	10	1.06	0.47	1.48	1.00	T.	3	16	9	5	5
1928...	53.9	95	12	1.50	0.75	0.74	1.00	T.	5	17	7	6	6
1929...	52.7	105	12	1.65	1.82	1.47	1.65	0	5	11	9	10	10
1930...	56.2	98	10	1.02	0.88	1.17	1.02	0	4	16	9	5	5
1931...	61.4	107	27	1.97	2.38	2.06	2.14	T.	6	18	7	5	5
1932...	56.8	102	22	1.10	0.56	0.23	0.63	0	3	18	8	4	4
1933...	60.9	101	22	1.03	0.71	0.70	0.81	0	4	16	8	6	6
1934...	52.4	95	9	1.28	0.86	0.74	0.96	2.0	7	11	9	10	10
1935...	57.2	105	16	0.73	0.44	0.12	0.43	0	3	15	9	6	6
1936...	60.3	102	12	1.47	1.29	0.68	1.15	T.	5	15	10	5	5
1937...	58.6	104	20	1.21	1.60	1.61	1.47	0.1	6	13	9	8	8
1938...	61.9	99	21	0.95	0.34	0.61	0.63	0	4	17	7	6	6
1939...	58.9	98	11	1.12	0.47	0.45	0.68	0.2	5	15	8	7	7
1940...	62.8	103	20	0.87	0.98	1.32	1.06	0	4	17	9	4	4
1941...	55.3	94	17	5.22	4.71	3.91	4.61	0.2	11	9	10	11	11
1942...	54.0	99	4	1.71	1.62	1.67	1.67	2.7	9	12	9	9	9
1943...	55.6	94	19	0.84	0.37	0.33	0.51	0	4	17	9	4	4
1944...	56.4	91	21	1.32	1.55	1.50	1.46	T.	8	12	10	8	8
1945...	54.5	103	14	3.18	1.73	1.50	2.14	0.1	9	11	9	10	10
Period	56.8	109	4	1.90	1.46	1.30	1.55	0.1	6	14	8	8	8

Climatological Data for September 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Carrington	Foster	1,579	48	53.0	-3.9	97	4†	21	16†	2.71	+1.29	0.76	8	0	9	12	12	6	nw.	Soo Line Agent.
Casselton	Cass	934	50	58.4	+0.5	98	6	26	28	3.29	+1.39	1.01	8	0	9	10	15	5	s.	C. Hayford.
Cavalier	Pembina	894	38	50.8	.....	94	5	20	29	3.24	+0.92	0.92	7	0	11	8	12	10	nw.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	.....	.....	.....	.....	2.93	+1.10	0.72	8	0	9	11	15	4	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	55.3	-2.4	98	5	17	29	3.47	+1.71	1.44	8	T	11	13	3	14	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	15	.....	.....	.....	.....	.....	.....	2.98	+1.14	1.26	7-8	0	12	12	9	9	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	53.2	-2.7	96	5	23	29	3.83	+2.20	1.92	7-8	T	14	8	8	14	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	45	56.4	-1.9	100	5	20	28	2.40	+0.74	0.76	7	0	10	8	11	11	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	22	51.0	-5.4	94	5	15	29	2.33	+0.48	0.68	7-8	0.5	10	10	9	11	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	56.4	-2.4	99	6	22	28	2.49	+0.81	1.31	18	0	9	8	8	14	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	65	56.2	-2.0	96	6	26	28	2.98	+0.76	0.96	7-8	0	12	7	13	10	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	54	57.3	-2.2	97	6	25	28	2.95	+0.88	1.29	19	0	11	20	4	6	nw.	Helge Dyste.
Fullerton	Dickey	1,439	48	57.0	-1.0	97	6	25	28	2.48	+0.52	0.66	17	0	10	11	10	9	s.	F. O. Alin.
Gackle	Logan	1,951	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Walter Kranzler.
Grafton	Walsh	827	54	55.4	-1.6	97	6	21	29	3.85	+1.69	1.65	7-8	T	13	13	5	12	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	55	53.7	-3.2	97	6	24	29	3.99	+2.07	2.13	7-8	T	18	6	11	13	n.	University of N. Dak.
Grand Forks Aprt. 2½ mi. W	Grand Forks	834	5	53.8	.....	98	6	21	28†	3.67	.....	2.03	7-8	T	14	10	3	17	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	56.0	-4.5	98	5	24	29	2.82	+0.72	0.76	19	0	10	9	9	12	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	52.0	-2.8	95	5	21	29	3.64	+1.53	1.10	10	3.0	10	3	11	16	w.	A. E. Prior.
Hillsboro	Trail	901	40	56.5	-2.5	100	6	24	28†	3.43	+1.36	0.84	26-27	T	11	5	13	12	n.	Alfred Jahneke.
Jamestown, 2 miles SE	Stutsman	1,457	54	55.9	-1.1	99	5	19	28	2.52	+0.85	1.05	7	0	11	6	10	14	e.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,491	5	54.8	.....	96	4†	20	28	2.18	.....	1.15	7	T	12	9	7	14	nw.	U. S. Airway Comm. Sta.
Keosau, 7 miles SW	Stutsman	1,440	5	54.0	.....	95	5	17	28	2.49	+0.96	0.78	7-8	0	12	10	8	12	nw.	U. S. Wildlife Refuge.
Langdon, 1½ mile SE	Cavalier	1,615	50	52.0	-1.5	96	5	19	29	3.09	+0.86	0.75	7-8	3.0	13	8	8	14	nw.	V. Sturlauguin.
Larimore	Grand Forks	1,134	53	52.8	-3.6	97	6	22	29†	3.00	+0.95	0.78	7-8	0	12	13	7	10	nw.	Chas. Ouradnik.
Lisbon	Ransom	1,091	42	55.3	-2.8	102	6	24	28†	2.20	+0.20	0.79	19	0	9	15	7	8	nw.	J. O. Halverson.
Mayville	Trail	975	50	55.6	-2.9	98	6	25	28	3.22	+1.16	0.91	8	0	11	5	12	13	s.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	23	52.6	-3.2	98	5	16	29	3.75	+2.32	2.00	7-8	T	13	10	6	14	sw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	34	58.3	-1.3	98	6	24	28	3.78	+1.75	1.58	7-8	0	9	14	9	7	sw.	J. G. Carlson.
McVille	Nelson	1,467	4	.....	.....	.....	.....	.....	.....	5.45	.....	3.58	7-8	0	10	4	14	12	se.	A. M. Casad.
Milnor	Sargent	1,117	13	55.8	.....	98	5†	23	28	3.33	+1.23	0.80	19	0	10	15	13	2	sw.	E. W. Wilson.
Oakes	Dickey	1,318	17	54.9	-4.1	98	6	24	28	2.30	+0.54	1.00	18-19	0	9	10	11	9	nw.	F. H. Murray.
Park River	Walsh	998	42	53.1	-3.8	96	6	19	28	3.42	+1.27	1.23	7-8	0.6	12	12	8	10	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	72	52.4	-2.1	91	5†	23	28	5.87	+3.69	2.66	8	T	13	6	9	15	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	15	53.2	.....	96	5	21	28	2.72	+0.75	0.95	8	0	12	14	8	8	nw.	T. C. Overland.
Sharon	Steele	1,516	22	54.7	-2.7	98	6	22	29	3.38	+1.33	2.03	7-8	T	12	10	6	14	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,229	41	56.2	-2.6	97	6	23	28	3.10	+1.30	0.60	7	0	14	13	5	12	nw.	Hettie Blythe.
Wahpeton	Richland	962	54	58.4	-1.6	100	6	26	28	2.71	+0.49	1.51	18-19	0	9	12	9	9	se.	W. J. Cavanaugh.
Average for Eastern Division				54.8	-2.7	102	6	15	29	3.18	+1.28	3.58	7-8	0.1	11	10	9	11	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	50	54.4	-3.5	101	5	23	28	1.64	+0.17	0.69	7	T	9	10	8	12	s.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,950	1	49.1	.....	90	4†	15	28	0.78	.....	0.27	7-8	T	7	11	10	9	s.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	43	53.2	-3.5	99	5	19	29	1.57	-0.12	0.83	21-22	0.2	9	9	5	16	ne.	Robert L. Peterson.
Bismarck	Burleigh	1,670	71	56.0	-2.1	102	5	22	29	1.76	+0.32	0.67	8	T	10	9	10	11	nw.	U. S. Weather Bureau.
Bismarck Airt. 2½ mi. SE	Burleigh	1,650	6	55.6	-1.7	102	5	20	29	1.99	+0.76	1.43	7	T	14	9	10	11	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	54	51.4	-4.1	95	4	21	27	0.96	-0.63	0.31	16-17	0.5	11	16	4	10	n.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	21	53.4	-4.1	94	4	20	29	1.55	+0.07	0.66	7-8	T	11	12	9	9	nw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	34	54.6	-3.5	102	5	23	27	2.03	+0.59	1.17	6-7	0	6	11	9	10	nw.	J. W. Evans.
Center	Oliver	2,100	8	52.8	.....	100	5	18	29	1.75	.....	0.89	7-8	T	7	8	14	8	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	53.8	-3.8	98	5	23	29	2.08	+0.65	0.92	8	T	9	16	10	4	w.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	50	52.2	-2.8	93	5	22	29	1.18	-0.49	0.28	10	0.1	12	10	9	11	w.	State Tuberculosis San.
Eckman	Bottineau	1,500	40	52.2	-3.5	97	4	19	29	1.05	-0.45	0.41	16-17	1.0	9	8	12	10	nw.	E. R. Sherman.
Fessenden	Wells	1,610	34	55.2	-1.4	100	5	24	29	2.19	+0.68	0.57	8	T	11	4	18	8	n.	John V. Zuber.
Fort Yates	Sioux	1,670	46	57.6	-2.6	101	5	22	29	2.86	+1.41	1.90	6-7	0	7	18	10	2	se.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	25	52.6	-3.6	101	4	14	29	0.85	-0.70	0.40	16-17	0.1	7	16	7	7	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	69	53.2	-2.7	98	4	22	29	1.23	-0.23	0.47	16-17	0	7	8	13	9	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	39	53.8	-2.1	97	4	22	29	1.20	-0.36	0.38	8	0	9	20	4	6	nw.	Fred Roble.
Hansboro	Towner	1,597	38	50.9	-3.3	97	5	15	29	1.12	-0.74	0.39	9-10	1.2	9	11	8	11	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	43	.....	.....	.....	.....	.....	.....	1.57	+0.14	0.65	7-8	T	8	6	18	6	nw.	H. J. Reynolds.
Leeds	Benson	1,515	5	52.1	.....	100	5	19	29	2.70	.....	0.92	11	0	11	9	15	0	nw.	John Dulmage.
Linton	Emmons	1,711	29	58.3	-1.5	103	5	20	28	2.60	+1.03	1.75	7-8	0	8	10	7	13	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	31	54.2	-2.7	98	4	21	28	2.00	+0.34	0.61	8	0	13	7	11	12	nw.	Benson Cy. A. & T. Sch.
Mandan, 1½ miles SW	Morton	1,750	32	54.9	-3.7	101	5	22	29	1.85										

Climatological Data for September 1945—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Elbowoods	McLean	2,082	53	53.4	-4.1	100	4	18	29	0.86	-0.63	0.22	6-7	0	6	11	15	4	nw.	H. W. Case.
Epping	Williams	2,224	37	52.8	-4.0	100	4	21	26	2.09	+0.80	0.70	21	0	6	12	5	13	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	17	.....	.....	.....	.....	.....	.....	1.48	+0.10	0.43	9	0	7	10	12	8	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	28	54.4	.....	100	4	23	27	1.65	+0.31	0.58	9-10	T.	6	9	13	8	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	5	51.8	-5.6	99	4	21	27	0.94	-0.33	0.35	16-17	T.	9	6	13	11	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	53.0	-2.3	100	4	20	27†	1.32	+0.09	0.60	9	0	5	11	10	9	se.	L. D. Nielson.
Halliday	Dunn	2,073	4	.....	.....	.....	.....	.....	.....	1.16	.....	0.43	7	0	6	12	13	5	nw.	John Kisse.
Hettinger	Adams	2,675	39	54.4	-4.2	101	5	21	29	1.91	+0.61	0.80	6-7	0	6	14	10	6	nw.	Edgar Martin.
Kenmare	Ward	1,799	14	53.0	-3.2	99	4	24	28†	1.13	-0.44	0.58	6-7	0.2	6	15	4	11	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	54.4	-3.4	99	4	22	27	1.47	+0.21	0.58	17	T.	8	16	4	10	nw.	S. P. Grane.
Medora	Billings	2,271	31	55.2	.....	102	4	23	27	1.21	-0.11	0.46	16-17	T.	6	17	6	7	w.	Harry Roberts.
Mott	Hettinger	2,424	39	56.0	-1.8	98	4	23	28	1.25	-0.12	0.70	6-7	T.	4	17	9	4	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	54	56.6	-0.8	102	4	23	29	1.24	-0.13	0.32	7	T.	9	12	13	5	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	.....	4	53.8	.....	95	4	25	27	0.75	.....	0.30	17	T.	8	12	11	7	w.	Peter F. Fieck.
Parshall	Mountrail	1,929	31	52.9	-2.4	102	4	15	29	1.04	-0.45	0.40	17	0	7	17	6	nw.	C. E. Shubert.	
Portal	Burke	1,954	32	51.2	-4.0	100	4	19	28	3.13	+1.67	2.00	21-22	2.5	7	11	6	13	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	52.2	-4.1	99	4	18	27	3.96	+2.67	1.78	17	0	7	12	8	10	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	30	54.1	-4.1	96	4†	25	27	1.40	+0.08	0.62	7-8	0	6	8	9	13	nw.	Assumption Abbey.
Ryder	Ward	2,108	17	.....	.....	.....	.....	.....	.....	1.42	-0.10	0.50	14	0	4	.....	.....	.....	.....	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	50.8	-6.7	101	4	20	29	0.93	-0.41	0.36	17	0	6	14	10	e.	H. J. Bugge.	
Stanley	Mountrail	2,258	8	50.9	.....	99	4	18	27†	1.81	.....	0.58	22	1.0	7	12	9	9	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	17	.....	.....	.....	.....	.....	.....	0.82	-0.58	0.33	16-17	0.4	9	15	6	9	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	17	.....	.....	.....	.....	.....	.....	1.84	+0.56	0.55	16	0	6	9	8	13	nw.	Morris J. Pederson.
Trotters	Golden Valley	.....	20	.....	.....	.....	.....	.....	.....	0.99	-0.24	0.34	8-9	T.	9	7	19	4	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	54.8	.....	106	4	18	29	1.21	.....	0.35	19	0	6	12	10	8	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	53.4	-4.3	102	4	22	27	1.35	+0.04	0.52	9	0	5	10	14	6	nw.	J. C. Zeller.
Wildrose	Williams	2,258	16	.....	.....	.....	.....	.....	.....	1.45	+0.26	0.37	19	0	6	24	5	1	nw.	Jonathan Winkler.
Williston	Williams	1,878	67	53.0	+3.6	99	4	24	28	1.51	+0.42	0.65	9	T.	6	7	10	13	nw.	U. S. Weather Bureau.
Average for Western Division				53.2	-3.7	102	4	15	29	1.50	+0.20	2.00	21-22	0.1	7	12	10	8	nw.	
Average for the State				54.5	-2.3	103	5	14	28†	2.14	+0.59	3.58	7-8	0.1	9	11	9	10	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
 † Trace, precipitation 0.005 inch or less.
 ‡ And other dates.
 † Best available used for stations not equipped with recorders.

Daily Temperatures for September 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	78	84	89	97	101	90	62	75	60	60	60	59	68	69	59	73	68	55	59	60	67	82	61	66	64	65	46	54	59	63	.....	68.4
	Minimum	46	42	53	49	60	58	54	52	45	41	42	41	31	36	33	46	48	43	39	34	35	43	35	27	28	39	27	23	27	37	.....	40.5
Bismarck Airport	Maximum	80	87	92	96	102	85	63	78	63	64	66	64	72	66	62	72	58	57	55	61	68	81	58	66	55	62	46	49	64	67	.....	68.6
	Minimum	52	46	59	57	62	61	56	53	47	48	48	45	36	40	32	51	48	42	37	37	36	44	35	30	36	36	25	24	20	36	.....	42.6
Bottineau	Maximum	74	81	86	95	93	74	67	76	56	61	60	58	76	70	54	60	59	45	51	66	51	50	53	61	50	53	61	42	41	68	71	63.8
	Minimum	42	44	50	56	57	65	51	49	45	45	46	44	32	46	28	40	47	37	33	32	32	36	35	26	22	34	21	23	22	34	.....	39.1
Carson	Maximum	82	87	93	99	102	84	66	81	75	65	74	66	76	70	54	60	59	51	51	53	65	60	56	64	60	62	49	52	64	72	.....	68.4
	Minimum	49	53	53	60	56	63	53	50	44	44	44	45	36	42	31	49	46	36	30	30	34	35	39	30	30	34	23	25	26	36	.....	40.9
Crosby	Maximum	75	89	90	97	99	89	69	85	58	64	70	61	80	63	59	55	54	60	48	51	50	55	44	43	51	53	41	39	67	73	.....	63.3
	Minimum	45	44	61	61	59	57	44	39	41	41	43	41	37	44	32	35	45	30	29	29	33	35	35	27	23	25	21	19	19	30	.....	37.6
Devils Lake	Maximum	74	79	88	96	96	90	64	74	58	58	62	59	69	55	54	63	62	58	58	44	51	71	55	57	56	61	42	42	64	65	.....	64.2
	Minimum	50	45	59	51	59	56	56	44	44	44	44	42	37	40	30	42	50	42	42	35	33	49	40	31	31	42	28	25	23	38	.....	42.3
Dickinson Airport	Maximum	77	89	90	97	96	78	57	81	55	62	73	63	75	64	60	65	52	53	48	59	63	65	53	61	60	61	46	47	65	68	.....	66.1
	Minimum	48	51	57	64	55	56	47	43	45	47	46	44	38	40	35	49	41	36	33	31	35	38	34	33	33	31	22	28	29	34	.....	40.8
Dunn Center	Maximum	75	83	88	97	92	77	55	78	51	61	70	61	73	62	58	63	52	56	47	56	54	63	52	58	55	60	44	41	59	68	.....	63.6
	Minimum	48	44	51	55	50	55	53	44	42	41	43	45	31	32	29	29	46	36	28	30	33	33	26	28	26	21	22	18	23	.....	36.4	
Fargo Airport	Maximum	76	80	91	91	95	96	70	74	65	59	59	62	67	63	57	65	70	59	61	52	64	66	60	65	58	64	52	50	61	62	.....	67.1
	Minimum	52	44	59	47	67	69	59	54	51	46	41	45	44	43	33	46	54	50	47	36	33	53	41	33	37	44	33	26	31	38	.....	45.2
Fessenden	Maximum	78	84	87	96	100	94	68	76	72	61	57	64	67	67	58	66	62	54	57	52	53	79	59	69	57	63	57	50	64	67	.....	67.9
	Minimum	50	41	62	55	62	62	55	54	46	43	45	42	37	42	27	44	50	39	40	37	33	49	39	30	33	41	29	26	24	40	.....	42.6
Fullerton	Maximum	78	81	91	93	94	92	79	73	73	62	61	59	65	69	59	72	70	57	60	60	65	78	63	65	61	65	55	53	59	61	.....	69.3
	Minimum	56	45	65	53	63	62	59	55	49	46	43	49	35	40	30	47	53	48	45	39	36	53	43	31	32	41	38	25	26	36	.....	44.8
Garrison	Maximum	77	83	91	98	97	80	62	78	58	63	69	64	75	62	59	67	55	62	49	59	56	74	55	61	56	64	46	46	66	72	.....	66.8
	Minimum	48	45	56	54	56	59	56	47	47	45	45	40	33	36	27	46	44	35	30	35	35	43	34	29	25	34	24	23	22	33	.....	39.5
Golva	Maximum	80	94	92	99	96	73	59	83	58	64	74	64	78	70	60	57	51	51	47	60	59	62	54	60	63	62	45	49	67	69	.....	66.7
	Minimum	44	45	52	56	49	51	40	34	44	45	46	36	30	33	37	45	36	32	30	28	40	37	31	30	31	29	21	22	29	.....	36.8	
Grafton	Maximum	74	79	91	92	93	97	77	74	77	57	60	59	69	69	54	62	63	62	59	58	53	60	61	56	54	58	58	42	63	65	.....	66.5
	Minimum	57	46	60	51	66	65	56	57	48	44	39	47	39	46	34	40	55	49	47	32	33	48	47	35	33	36	35	22	21	38	.....	44.2
Grand Forks Airport	Maximum	74	79	90	92	94	98	66	74	62	59	59	68	59	57	65	66	60	60	47	56	62	60	61	56	60	45	41	62	65	.....	65.2	
	Minimum	50	44	55	49	67	62	56	54	48	46	37	48	37	42	30	42	52	49	44	32	30	49	37	32	35	41	25	21	21	37	.....	42.4
Jamestown Airport	Maximum	79	84	93	96	96	92	65	75	60	60	60	58	68	65	59	69	69	58	60	56	65	80	59	68	60	70	47	49	63	65	.....	68.3
	Minimum	49	40	58	48	62	64	56	51	46	45	41	40	35	39	28	45	50	47	42	36	34	47	34	28	34	37	24	20	23	37	.....	41.3
Kenmare/	Maximum	76	85	88	99	93	79	67	82	54	61	66	63	80	61	58	56	53	62	51	54	50	62	49	50	55	59	47	44	65	74	.....	64.8
	Minimum	52	48	60	60	62	63	52	45	47	45	48	45	39	47	30	37	47	34	33	35	35	35	37	33	26	31	26	24	24	34	.....	41.1
Langdon	Maximum	74	77	86	92	96	94	70	74	68	58	59	58	69	62	52	58	58	62	60	55	47	60	54	57	53	65	54	40	52	66	.....	64.3
	Minimum	53	43	57	52	58	60	53	54	47	45	38	44	32	45	23	36	50	39	40	32	28	41	41	29	25	36	25	21	19	26	.....	39.7
Marmarth	Maximum	82	93	91	99	98	88	59	81	75	66	77	64	76	76	65	61	67	47	37	63	63	63	55	61	61	60	50	68	68	.....	69.1	
	Minimum	44	50	59	64	48	55	33	39	45	47	47	45	32	35	40	48	45	37	32	25	40	52	33	30	40	31	22	25	25	28	.....	39.7
Minot Airport	Maximum	74	85	88	97	94	75	63	78	62	60	58	62	76	60	58	60	55	60	53	52	51	70	52	53	53	62	43	42	66	73	.....	64.5
	Minimum	49	46	62	59	55	59	56	46	46	46	46	46	37	35	29	44	45	36	32	36	34	43	33	30	25	38	27	25	22	39	.....	40.7
Mott	Maximum	82	90	94	98	98	86	70	84	74	64	76	68	76	70	58	68	64	57	50	62	64	72	55	62	60	59	53	60	64	68	.....	70.2
	Minimum	47	50	66	76	70	56	54	42	46	44	46	48	34	36	33	50	46	38	30	29	36	35	40	32	30	24	23	30	32	.....	41.9	
Pembina Airport	Maximum	72	77	85	84	91	91	65	71	62	56	56	58	69	56	55	56	64	64	61	46	52	61	56	52	53	61	42	38	59	63	.....	62.5
	Minimum	53	45	58	52	63	58	55	52	48	42	38	48	38	41	33	39	52	48	44	32	31	48	43	34	28	37	25	23	25	35	.....	42.3
Sharon	Maximum	76	79	94	91	97	98	70	75	60	57	60	59	72	58	59	63	64	62	64	50	55	63	58	63	56	68	54	40	61	64	.....	66.3
	Minimum	56	45	59	53	65	61	55	55	50	43	37	43	35	43	30	39	54	45	44	36	32	48	44	34	29	34	31	25	22	38	.....	43.1
Steele	Maximum	78	85	90	97	98	85	70	74	65	59	61	60	68	64	58	71	68	55	58	57	70	81	59	64	56	66	56	47	62	64	.....	68.1
	Minimum	53	45	55	56	62	60	55	51	49	43	44	46	33	38	29	45	49	40	34	35	34	34	37	28	33	35	29	21	23	39	.....	41.2
Valley City	Maximum	76	80	88	91	93	97	83	72	67	61	61	67	66	65	66	66	59	60	54	62	74	74	64	62	68	55	49	61	65	.....	68.4	
	Minimum	55	39	58	48	63	64	58	55	48	45	42	49	40	38	31	44	55	48	45	39	34	50	44	31	33	41	35	23	24	39	.....	43.9
Wahpeton	Maximum	80	82	88	91	99	100	98	77	75	63	63	66	66	74	68	64	71	74	65	61													

Daily Precipitation for September 1945

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James							.40	.76		.23		.47						.25		.23		.20					.16		.01			2.71
Casselton	Red.							1.01		.38		T.						.01	.51	.45	.07		.25	.14				.47					3.29
Cooperstown	Sheyenne							.23	1.44		T.	.24	.24	.10			.06	.17	.46	.13	.06		.34	T.				T.					3.47
Courtenay	James						.08	.33	1.26		.18	.05	.10					.20	.48	.09	.05		.07					.09					2.98
Devils Lake ^{1 5}	Devils Lake	T.			T.			.62	1.50	.04	.28	.65	.03		.01		T.	.08	.11	.09	.02	.26	.03					.11					3.83
Edgeley	James							.51	.25		.13	.02	.02					.17	.52	.50		.04						.24					2.40
Edmore	Devils Lake							.11	.68	.09	.37	.18					T.		.31		.10	.38	.01										2.33
Ellendale	James							.46	.03		.12	T.	.10						.71	.60		.23						.05	.19				2.49
Fargo ^{1 5}	Red.	T.						.96	.07	T.	.21	.02	.20				.01	.48	.68	.03	T.		.16					.15	.01				2.98
Forman	Sheyenne			.07				.27	.15		.23	.03	.09						.44	1.29		.20						.12	.06				2.95
Fullerton	James							.41	.06		.13	.02					.18	.66	.22	.42		.22						.16					2.48
Gackle	do																																
Grafton	Red.							.18	1.65	.23	.36		.12	.06			.06	.06	.44		.27	.07	.14	T.			.21						3.85
Grand Forks Airport ³	do			.01			T.	.57	1.65	.07	.07	T.	.09				.04	.50	.09	.20	.09	T.	.21		.04		.04	T.					3.67
Hankinson ²	do								.39			.22	.05					.65	.76				.05	.30				.19	.14				2.82
Hannah	Pembina							.14		.60	.25	1.10					.10		.30		.15	.60						.10		.30			3.64
Hillsboro	Red.							.43	.70		.16	T.	.16				T.	.07	T.	.53	.28	.04	.22				.04	.80	T.				3.43
Jamestown Airport ³	James				T.			1.15	.06	T.	.16	.14	.02				T.	T.	.30	.10	.11		.04	T.			.02	.04	.04				2.18
Langdon	Pembina							.75	.15	.56	.02							.02	.01	.30	T.	.08	.45	.03			.05	.05	.22				3.09
Larimore	Red.	.10						.30	.78		.38			.10				.03	.61	.03	.20		.40				.05	.02					3.00
Lisbon	Sheyenne							.48		.12	T.	.12						.18	.79	T.		.03	.20			.04	.24						2.20
Mayville	Red.							.20	.91		.32	.01	.01	.03				.37	.22		T.	.33	.22				.60						3.22
McHenry	James							.36	2.00	T.	.37	.08	.16					.10	.35	.13		.04		.01			.07	.06	.02				3.75
McLeod	Sheyenne							.79	.79		.24	.09						T.	1.41	.03		.19					.09	.15					3.78
Oakes ²	James				T.			.50		.07	.13	.14						.20	1.00	T.		.14				.02	.10						2.30
Park River	Red.							.25	1.23	.15	.36	T.	.14				.02	.02	.55		.29	.13	.09				.27		.06				3.42
Pembina Airport ³	do							.01	2.66	1.47	.39	.01	.12				T.	.13	.44	.01	.21	.31	.06	T.			.05	T.	T.				5.87
Petersburg	do							.24	.95	.11	.34							.03	.03	.46	.04	.20	.05	.03			.24	T.					2.72
Sharon	do							.36	1.67	T.	T.	T.	.33					.03	.05	.45	.14	.05	T.	.25	T	T		.01	.01	.03			3.38
Valley City	Sheyenne							.60	.47		.14	.05	.13					.06	.12	.57	.36	.02		.31			.15	.11	.01	T.			3.10
Wahpeton	Red.							.08	.38		.42		.06	.02				T.		.46	1.05			T.	.08	T.		.16					2.71
Middle Division																																	
Ashley ³	Missouri			T.				.01	.69	T.	.05	.10	.04				T.	T.	.33	.20	T.							.21	.01	T.			1.64
Bisbee	Devils Lake								.27	.07	.19	.06						.03		T.			.75	.08				.09		.03			1.57
Bismarck Airport ^{1 5}	Missouri			T.				1.43	.07	.05	.04	T.	.08				.01	.04	.15		.01		.03	.01			.01	.01	.05				1.99
Bottineau ²	Mouse								.08	.09	.19	T.	.05	T.	.03	.04		.31			.09		T.	.02	.01			.05					0.96
Butte	do							.03	.63	.09	.25	.13	T.					.02	.04		.15		.14				.03						1.55
Carson	Heart							1.17	.10		.05							.44		.10		.17											2.03
Center	Missouri							.47	.42	.01	.15							.37		.15								.18					1.75
Drake ²	Mouse							.92	.10	.25	.02	.15						.01			.19		.41					.03					2.08
Dunseith	do			.03				T.	.23	.16	.28	.09	T.				.02	.04	.06		.13	.03	.06	T.				.05					1.18
Eckman	do			.01					.24	.10	.10					.02		.13	.28				.07					.10					1.05
Fessenden	James							.50	.57	.07	.22	.11						T.	.22	.02	.30						.06						2.19
Fort Yates	Missouri							1.50	.40		.06		.02					.25	.60	.03							T.						2.86
Foxholm	Mouse				T.				.03	.15	.07	T.	T.					.40			.17				.02			.01					0.85
Garrison ³	Missouri							.36	.06	.15	.02						.11	.36		.17													1.23
Granville	Mouse				T.			T.	.38	.10	.10	.09	.02					.09	.18		.18						.06						1.20
Hansboro	Devils Lake								.29	.08	.31	.01				.03		.06	T.			.22	.02				T.		.10				1.12
Linton	Missouri			.04				1.30	.45		.14		.13					.10	.40	.04													2.60
Maddock	Sheyenne								.55	.83		.07						.07	.10		.01		.09				T.	.08					1.85
Mandan ²	Missouri							.03	.33	.06	.16		.25					.27			.41						.02	T.					1.28
Max ²	do							.38	.84	.05	.21	.25	.01					.08			.24		T.				.06	.04	T.				2.16
McClusky	do							.12	T.	.17	.10	.02					.02	.11	.22		.14		T.	.02				.02					0.94
Minot Airport ³	Mouse			T.	T.	T.		T.	.12	T.	.17	.14	.06				.02	.12	.48		.02							.24					1.21
Mohall	do	.01			T.				.65	1.00		.30	.07					.01	T.	.34	.08		.02					.18					

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LIV BISMARCK, N. D., OCTOBER 1945 No. 10

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The temperature during October averaged slightly above normal in all three sections of the state but with some scattered stations reporting below normal temperatures. Some high winds occurred but no severe storms were reported. The precipitation averaged below normal, with the least amount in the eastern division. It was one of the driest Octobers of record, but averaged 0.25 inch more than October 1944 which was the driest of record. It was an excellent month for outdoor work. Corn picking and potato and beet digging made excellent progress and the dry sunny weather was favorable for maturing late crops. The small grain harvest was nearly completed at the close of the month. Livestock were in good condition and the feed supply was adequate. It was too dry for fall plowing in some places but the average amount of this work was accomplished. Lakes in the northern part of the state froze over on the 30th or 31st.

TEMPERATURE

The mean temperature for the state was 45.1°, or 0.9° above the 1892-1945 average for October. The mean temperature for the eastern division was 44.5°; for the middle division, 45.0°; and for the western division, 45.9°. The highest mean temperature was 48.6° at Almont and Medora, and the lowest, 40.2° at Edmore, making a range in mean temperature of 8.4°. The absolute range was 83°, from 89° at Fort Yates on the 16th, to 6° at McHenry and Willow City on the 31st. The average daily excess in temperature for the state since January 1, 1945, is 0.4°.

PRECIPITATION

The average precipitation for the state was 0.37 inch, or 0.61 inch less than the 1892-1945 average for October. In the eastern division the average amount was 0.28 inch; in the middle division, 0.36 inch; and in the western division, 0.48 inch. The greatest monthly amount reported was 1.23 inches at Crosby; there was none reported at four stations and five other stations reported only a trace. The greatest amount recorded in any 24 consecutive hours was 1.07 inches at Crosby on the 17-18th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 2.28 inches. The average snowfall was a trace.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	1	6	...	1	...	1	...	13	...	1	...	1	...	1	...	6	1	...	1	...	1	...	6	1	...	1	...	1	...	1	9
Lunar halos
Solar halos
Hail
Thundrsts.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.43	29	29.46	31	10.0	45	nw.	18	66	72	43	42	57	574
Devils Lake...	30.45	29	29.39	18	8.2	29	nw.	30	71	78	52	52	49	662
Fargo	30.42	29	29.40	18	11.7	40	nw.	25	77	83	55	59	51	630
Williston.....	30.40	8	29.33	31	7.2	31	nw.	18	65	74	44	47	69	573

† And other dates.

COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	47.2	95	7	0.25	1.20	0.30	0.58	T.	3	15	8	8	
1893...	40.6	79	0	1.17	1.08	0.89	1.05	0.9	5	11	11	9	
1894...	43.0	77	16	2.28	1.76	0.94	1.66	0.0	6	14	8	9	
1895...	40.5	85	-12	0.31	0.15	0.27	0.24	0.0	2	16	8	7	
1896...	40.2	88	5	1.25	0.43	0.40	0.69	0.0	3	14	8	9	
1897...	45.9	93	6	1.01	0.75	0.56	0.77	0.8	4	13	9	9	
1898...	38.8	84	8	2.60	2.42	1.67	2.23	4.7	6	8	8	15	
1899...	42.1	86	7	1.16	1.21	1.15	1.17	1.3	5	11	8	12	
1900...	48.2	87	14	2.34	1.30	0.98	1.54	T.	6	15	4	12	
1901...	47.5	88	11	2.96	1.22	0.65	1.61	T	5	17	7	7	
1902...	43.7	87	10	1.70	1.20	0.95	1.28	0.7	4	16	6	9	
1903...	47.0	81	11	1.42	0.80	0.60	0.94	0.2	3	19	5	7	
1904...	46.6	87	10	1.55	0.60	0.46	0.90	T.	5	12	7	12	
1905...	40.3	93	0	0.59	0.22	0.28	0.36	1.2	5	8	12	11	
1906...	45.0	89	0	0.75	0.45	0.27	0.49	1.4	4	14	9	8	
1907...	44.4	88	4	1.02	0.66	0.16	0.61	0.2	3	21	5	5	
1908...	43.0	86	8	1.46	1.36	2.07	1.63	0.7	6	11	7	13	
1909...	43.1	97	0	0.88	0.63	0.45	0.65	0.9	3	14	8	9	
1910...	48.2	95	0	0.49	0.66	0.38	0.51	0.1	3	16	8	7	
1911...	42.5	86	-10	1.25	1.27	1.20	1.24	0.5	6	11	8	12	
1912...	44.4	90	0	0.68	1.09	1.44	1.07	3.5	4	16	6	9	
1913...	39.3	90	-2	2.40	1.34	1.03	1.59	0.7	4	12	9	10	
1914...	50.0	97	0	1.20	0.93	0.65	0.93	T.	4	16	8	7	
1915...	46.6	87	10	1.22	0.91	1.14	1.09	0.2	4	17	8	6	
1916...	40.0	85	-2	0.49	0.88	0.73	0.70	2.0	4	12	8	11	
1917...	34.7	82	-4	0.87	0.76	0.71	0.78	5.4	5	8	11	12	
1918...	46.2	90	4	0.80	0.45	0.35	0.53	0.8	4	14	8	9	
1919...	33.5	84	-18	0.93	1.14	1.35	1.14	9.3	6	11	9	11	
1920...	49.3	95	6	0.53	0.28	0.83	0.55	0.1	3	16	8	7	
1921...	47.3	88	16	0.80	1.09	0.10	0.66	T.	4	16	8	7	
1922...	45.7	98	8	0.37	0.65	0.73	0.58	2.3	3	15	7	9	
1923...	44.0	84	-8	0.56	1.02	1.08	0.89	0.5	4	14	7	10	
1924...	50.3	86	19	2.31	2.14	2.82	2.42	0.3	7	17	5	9	
1925...	33.3	66	-16	0.83	0.64	0.96	0.81	3.7	6	8	9	14	
1926...	42.6	85	4	2.54	0.86	0.68	1.36	1.0	6	10	10	11	
1927...	47.0	88	12	1.53	1.49	0.96	1.33	1.0	5	14	8	9	
1928...	43.5	85	3	0.69	0.18	0.51	0.46	0.6	2	15	8	8	
1929...	46.8	88	10	2.87	1.63	1.05	1.85	5.1	6	17	5	9	
1930...	40.8	86	0	2.04	1.90	1.48	1.81	0.3	7	10	9	12	
1931...	47.7	90	10	2.63	0.93	0.60	1.39	0.2	6	15	6	10	
1932...	38.3	90	-3	2.33	2.41	2.06	2.27	9.1	8	9	7	15	
1933...	41.5	88	5	0.39	0.48	0.74	0.54	1.7	4	14	8	9	
1934...	49.0	94	5	2.11	0.83	0.08	1.01	0.1	3	14	8	9	
1935...	43.5	86	-10	0.29	0.08	0.12	0.16	0.7	2	15	9	7	
1936...	42.3	90	-5	0.23	0.16	0.24	0.21	1.1	3	14	9	8	
1937...	43.9	94	1	0.40	0.92	1.08	0.80	0.2	4	12	9	10	
1938...	50.9	95	4	0.27	0.44	0.95	0.55	1.1	4	16	7	8	
1939...	41.3	84	-6	1.17	0.64	0.44	0.75	1.2	7	8	10	13	
1940...	50.7	89	18	2.16	1.26	1.26	1.56	T.	6	14	8	9	
1941...	44.5	81	0	1.78	1.24	0.94	1.32	2.0	5	13	9	9	
1942...	46.5	90	-3	0.55	0.41	0.42	0.46	1.8	4	14	8	9	
1943...	48.2	89	10	0.86	0.64	0.78	0.76	2.8	3	18	6	7	
1944...	48.7	84	11	0.25	0.08	0.02	0.12	T.	1	21	8	2	
1945...	45.1	89	6	0.28	0.36	0.48	0.37	T.	3	15	9	7	
Period	44.2	98	-18	1.22	0.92	0.80	0.98	1.4	4	14	8	9	

Climatological Data for October 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Carrington	Foster	1,579	48	44.4	+0.7	85	15†	12	29	0.13	-0.90	0.13	21	0	1	13	12	6	nw.	Soo Line Agent.	
Casselton	Cass	934	50	46.0	+1.3	82	16†	20	31	0.21	-1.14	0.11	21	0	3	5	18	8	s.	C. Hayford.	
Cavalier	Pembina	894	38	42.8	.....	84	16	13	31	0.61	-0.68	0.46	18	0	2	13	16	2	nw.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	.....	.....	.....	.....	0.00	-1.11	0.00	.....	0	0	17	14	0	nw.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	45.6	+0.9	85	16	8	31	0.28	-0.80	0.20	21	0	2	17	7	7	nw.	R. J. Lockner	
Courtenay	Stutsman	1,523	15	.....	.....	.....	.....	.....	.....	0.21	-0.94	0.14	18	0	2	23	5	3	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	43.8	+1.4	83	16	16	31	0.44	-0.81	0.23	18	T	2	12	9	10	nw.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	45	46.0	+0.4	86	16	12	29	0.11	-0.91	0.08	10	0	3	15	9	7	nw.	N. Dak. Agri. Exp. Sta.	
Edmore, 1½ miles W.	Ramsey	1,524	22	40.2	-2.3	80	16	7	31	0.52	-0.46	0.31	18-19	T	2	19	8	9	nw.	Mike Davis.	
Ellendale	Dickey	1,457	47	46.2	+0.3	83	16	13	31	0.06	-1.00	0.03	1	0	3	17	5	9	nw.	J. E. Demmer.	
Fargo Airport, 2½ mi. NNW	Cass	895	65	44.6	+0.1	82	17	13	31	0.35	-1.84	0.22	21	T	4	10	9	12	s.	U. S. Weather Bureau.	
Forman	Sargent	1,249	54	46.8	+3.8	83	17	15	31	0.12	-1.23	0.12	1	0	1	20	7	4	nw.	Helge Dyste.	
Fullerton	Dickey	1,439	48	46.6	+1.3	82	17	14	31	0.07	-1.26	0.07	18-19	0	1	12	13	6	nw.	F. O. Alin.	
Gackle	Logan	1,951	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Walter Kranzler.
Grafton	Walsh	827	54	44.5	+0.7	81	16	12	31	0.48	-0.66	0.25	7	T	2	15	10	6	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	55	43.6	-0.1	80	17	15	31	0.44	-0.92	0.20	18-19	T	5	10	12	9	n.	University of N. Dak.	
Grand Forks Appt., 2½ mi. W	Grand Forks	834	5	42.8	.....	79	17	12	31	0.31	-0.92	0.17	18	T	4	10	7	14	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	45.2	-1.4	85	17	15	31	0.38	-0.99	0.32	1	0	2	17	7	7	nw.	Soo Line Agent.	
Hannah	Cavalier	1,568	52	41.2	+0.4	82	16	10	31	0.41	-0.66	0.27	18-19	0	4	5	15	11	nw.	A. E. Prior.	
Hillsboro	Trail	901	40	44.9	-0.3	82	17	12	31	0.50	-0.84	0.23	7	T	3	7	13	11	nw.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	54	44.8	+0.1	83	3	11	31	0.25	-1.04	0.16	18	0	3	22	3	6	nw.	N. Dak. State Hospital.	
Jamestown Airpt., 2 mi. NE.	Stutsman	1,494	5	44.6	.....	87	16	12	31	0.28	-0.14	0.18	0	0	4	13	8	10	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	44.1	.....	83	16	9	31	T	.....	.....	.....	.....	0	15	5	11	nw.	U. S. Wildlife Refuge.
Langdon, 1½ mile SE	Cavalier	1,615	50	42.7	+1.8	81	16	9	31	0.42	-0.61	0.15	7	T	5	8	18	5	nw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	53	43.0	-1.1	82	16	10	31	0.43	-1.01	0.25	19	0	2	20	5	6	nw.	Chas. Ouradnik.	
Lisbon	Ransom	1,091	42	46.2	+1.5	85	17	13	31	0.02	-0.81	0.21	18-19	T	4	9	13	9	n.	J. O. Halverson.	
Mayville	Trail	975	50	45.8	-0.2	79	16†	12	31	0.45	-0.81	0.21	18-19	T	4	9	13	9	n.	H. A. Ragaz.	
McHenry, 3 miles NE	Eddy	1,509	23	42.1	-1.2	85	16	6	31	0.32	-0.73	0.15	7	0	4	12	12	7	nw.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	34	47.6	+1.1	85	4†	10	31	0.00	-1.38	0.00	.....	0	0	18	10	3	nw.	J. G. Carlson.
McVille	Nelson	1,467	4	.....	.....	82	17	12	31	0.20	-0.20	0.20	18	0	0	22	9	0	nw.	A. M. Casad.
Milnor	Sargent	1,117	13	44.3	.....	82	17	12	31	0.00	-1.36	0.00	.....	0	0	22	9	0	nw.	E. W. Wilson.
Oakes	Dickey	1,318	17	47.2	+1.2	87	17	13	31	0.12	-1.19	0.10	1	0	0	2	18	10	3	nw.	F. H. Murray.
Park River	Walsh	996	42	43.6	-0.1	84	16	9	31	0.42	-0.76	0.24	7	0	3	22	6	3	nw.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	795	72	41.6	0.0	78	15†	14	31	0.66	-0.54	0.55	18-19	T	5	6	14	11	nw.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	15	43.2	.....	82	16	12	31	0.47	-0.70	0.27	19	0	2	13	13	5	w.	T. C. Overland.
Sharon	Steele	1,516	22	43.8	+0.2	84	16	13	31	0.28	-1.01	0.18	7	0	3	18	7	6	w.	Nels O. Grefsheim.	
Valley City	Barnes	1,229	41	46.2	+1.1	85	16	12	31	0.12	-1.06	0.09	18	0	3	18	7	6	w.	Hettie Blythe.	
Wahpeton	Richland	962	54	47.5	+0.5	87	17	10	31	0.25	-1.19	0.12	1	0	5	16	11	4	nw.	W. J. Cavanaugh.	
Average for Eastern Division				44.5	+0.2	87	16†	6	31	0.28	-0.94	0.55	18-19	T	2	14	10	7	nw.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,025	50	44.0	0.0	84	16	10	30†	0.01	-1.05	0.01	1	0	1	12	7	12	nw.	U. S. Airway Comm. Sta.	
Belcourt	Rolette	1,960	1	40.6	.....	78	3†	7	31	0.50	.....	0.30	18	T	4	10	14	7	nw.	Turtle Mt. Indian Agency.
Bisbee	Towner	1,601	43	41.8	-2.0	82	16	11	31	0.40	-0.59	0.22	18	0	2	17	5	9	nw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	71	47.8	+2.6	86	3†	17	31	0.03	-0.88	0.03	18	0	1	11	7	13	nw.	U. S. Weather Bureau.	
Bismarck Airpt., 2½ mi. SE.	Burleigh	1,650	6	46.4	+2.8	86	16	15	31	0.07	-0.87	0.06	18	0	2	11	7	7	nw.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	54	44.9	+3.5	84	3	10	29	0.75	-0.22	0.52	18	T	8	17	7	7	nw.	N. D. School of Forestry.	
Butte, 3 miles WSW	McLean	1,880	21	46.0	+1.2	81	16	11	31	0.57	-0.40	0.50	18-19	T	4	12	5	14	nw.	R. L. Williams.	
Carson, 2½ miles SW	Grant	2,500	34	47.2	+2.7	87	16	19	8	0.00	-0.91	0.00	.....	0	0	17	8	6	nw.	J. W. Evans.
Center	Oliver	2,100	8	43.6	.....	87	16	13	31	0.18	.....	0.17	18	0	3	11	16	4	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	45.2	+2.1	84	3	14	31	0.52	-0.52	0.36	18	0	3	16	5	10	nw.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	50	43.0	+1.4	86	3	10	31	0.58	-0.28	0.31	18	0	3	11	13	7	nw.	State Tuberculosis San.	
Eckman	Bottineau	1,500	40	43.1	+0.9	85	16	7	31	0.68	-0.16	0.50	18	0	3	12	15	4	nw.	E. R. Sherman.	
Fessenden	Wells	1,610	34	44.8	+1.5	82	16	13	31	0.43	-0.63	0.26	18	T	5	15	10	6	w.	John V. Zuber.	
Fort Yates	Sioux	1,670	46	43.0	+1.3	89	16	15	24†	T	-0.99	T	18	0	0	22	6	3	nw.	P. J. Jacobson.	
Foxholm, 6½ miles NE.	Ward	1,657	25	45.6	+2.7	83	3†	9	31	0.67	-0.21	0.67	18	T	1	13	7	11	nw.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	69	45.5	+2.3	84	3†	15	29†	0.40	-0.46	0.18	18	T	4	14	5	12	nw.	Mae H. Vorachek.	
Granville	McHenry	1,504	39	45.2	+1.6	87	16	10	31	0.72	-0.12	0.44	18	0	4	23	7	1	nw.	Fred Roble.	
Hansboro	Towner	1,597	38	42.0	+0.7	83	16	9	31	0.52	-0.52	0.34	18	0	4	13	12	6	nw.	W. E. Disher.	
Harvey, 3 miles SE	Wells	1,596	43	.....	.....	83	16	10	31	0.37	-0.70	0.35	18	0	2	15	11	5	nw.	H. J. Reynolds.
Leeds	Benson	1,515	5	44.1	.....	88	16	10	31	0.34	.....	0.25	18	0	3	15	9	7	nw.	John Dulmage.
Linton	Emmons	1,711	29	47.6	+2.1	88	16	12	31	0.05	-0.99	0.05	18-19	0	1	14	10	7	nw.	Wm. Heyerman.	
Maddock, 1 mile E	Benson	1,604	31	44.0	+0.5	84	16	9	31	0.51	-0.47	0.30	18	0	4	13	14	4	nw.	Benson Cy. A. & T. Sch.	
Mandan, 1½ miles SW	Morton	1,750	32																		

Climatological Data for October 1945—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	53	45.8	+1.0	85	16	14	29	0.24	−0.56	0.23	18	0	2	20	9	2	nw.	H. W. Case.
Epping	Williams	2,224	37	45.8	+3.7	83	3	15	18	0.74	−0.03	0.67	18	0	2	17	10	4	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	17	45.8	.....	83	3	15	18	0.43	−0.41	0.30	18	0.5	4	15	10	6	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	28	47.0	.....	83	16	14	24	0.27	−0.70	0.17	23	T.	2	16	14	1	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	5	45.2	+0.7	82	16	14	29	0.23	−0.67	0.20	18	0.1	4	12	11	8	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	46.5	+4.4	83	3†	17	8†	0.91	+0.12	0.81	18	0	2	19	9	3	w.	L. D. Nielson.
Halliday	Dunn	2,073	4	45.8	.....	83	3†	17	8†	0.23	−0.75	0.04	24-25	T.	1	16	9	6	nw.	John Kisse.
Hettinger	Adams	2,675	39	46.4	+0.3	85	16	19	29	0.14	−0.57	0.11	1	0	2	14	11	6	nw.	Edgar Martin.
Kenmare	Ward	1,799	14	45.6	+2.1	84	16	14	31	0.80	−0.16	0.73	19	0	3	17	10	4	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	45.9	−0.1	84	16	17	8†	1.08	+0.29	1.05	18	T.	3	19	7	5	nw.	S. P. Grane.
Medora	Billings	2,271	31	48.6	.....	86	3†	17	29	0.16	−0.62	0.13	23	0.2	2	24	5	2	w.	Harry Roberts.
Mott	Hettinger	2,424	39	46.0	+1.6	84	16	14	24	T.	−0.83	T.	1†	0	0	21	9	1	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	54	47.6	+3.5	85	3†	18	29	0.04	−0.75	0.04	24-25	0	1	18	13	0	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn	4	45.3	.....	81	3	16	29	0.06	.....	0.04	18	0.1	3	23	4	4	nw.	Peter F. Fieck.	
Parshall	Mountrail	1,929	31	44.3	−0.1	83	16	9	31	0.39	−0.36	0.34	18	T.	4	7	22	2	nw.	C. E. Shubert.
Portal	Burke	1,954	32	43.8	+2.3	81	15	15	29†	0.84	0.00	0.80	18	0	4	11	15	5	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	45.8	+1.3	81	16	15	8	1.10	+0.05	0.65	18	0	3	14	13	4	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	30	48.4	+3.8	82	16	21	8	0.10	−0.69	0.10	20	0	1	17	8	6	nw.	Assumption Abbey.
Ryder	Ward	2,108	17	45.8	.....	83	16	12	29	0.66	−0.14	0.48	18	T.	2	18	7	6	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	43.7	−0.5	83	16	12	29	0.73	−0.04	0.39	18	0	5	8	18	5	w.	H. J. Bugge.
Stanley	Mountrail	2,258	8	43.3	.....	81	3	10	29	0.63	.....	0.50	17	0	2	11	12	8	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	17	45.8	.....	83	16	12	29	0.49	−0.29	0.38	18	0.1	5	13	13	5	nw.	Geo. N. Pilgrard.
Tioga	Williams	2,279	17	45.8	.....	83	16	12	29	1.04	+0.23	0.72	18	0	3	12	13	6	nw.	Morris J. Pederson.
Trotters	Golden Valley	2,079	20	45.8	.....	83	16	12	29	0.38	−0.42	0.28	18	T.	2	4	23	4	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	47.2	.....	87	15†	11	29†	0.30	.....	0.25	18	0	2	9	17	5	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	46.3	+2.1	84	3†	14	8†	0.49	−0.38	0.33	18	T.	3	15	13	3	w.	J. C. Zeller.
Wildrose	Williams	2,258	16	45.8	.....	83	16	12	29	1.12	+0.32	0.97	18	0	3	26	3	2	nw.	Jonathan Winkjer.
Williston	Williams	1,878	67	46.5	+3.1	82	16	17	29	0.72	−0.14	0.54	18	T.	4	10	11	10	w.	U. S. Weather Bureau.
Average for Western Division				45.9	+1.9	87	15†	9	31	0.48	−0.32	1.07	17-18	0.1	3	15	11	5	nw.	
Average for the State				45.1	+0.9	89	16	6	31	0.37	−0.61	1.07	17-18	T.	3	15	9	7	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
 † Trace, precipitation 0.005 inch or less.
 ‡ And other dates.
 † Best available used for stations not equipped with recorders.

Daily Temperatures for October 1945

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum..	64	67	82	74	76	62	52	46	62	68	68	56	70	58	76	84	81	63	60	55	50	48	47	52	45	53	63	58	48	55	45	60.9
	Minimum...	36	32	39	36	32	40	27	21	19	41	33	30	32	29	33	35	40	35	29	34	18	17	14	14	29	24	22	31	20	10	10	27.8
Bismarck Airport	Maximum..	62	68	85	73	74	66	52	48	71	71	68	61	69	62	80	86	81	55	59	56	50	50	46	56	46	57	60	61	49	53	48	62.0
	Minimum...	36	34	42	38	38	42	26	25	25	40	39	40	41	29	34	37	41	35	28	37	25	19	21	29	30	23	28	19	16	15	30.1	
Bottineau	Maximum..	67	69	84	82	66	65	61	45	64	67	66	57	68	77	79	81	81	72	53	55	56	48	45	53	51	43	52	54	53	45	36	61.7
	Minimum...	32	31	39	40	31	30	28	26	24	38	33	32	33	33	36	44	36	34	27	26	24	19	26	24	26	16	22	29	10	29	11	28.7
Carson	Maximum..	62	72	84	74	70	70	57	42	69	65	52	65	74	66	83	87	80	60	60	56	50	51	47	54	46	60	60	49	53	52	62.3	
	Minimum...	38	33	40	35	39	35	40	19	28	38	42	36	38	27	37	44	45	35	25	37	23	26	22	21	30	26	27	35	22	28	32.0	
Crosby	Maximum..	59	68	79	63	65	65	47	47	67	73	56	63	68	66	81	80	73	44	52	55	47	44	46	52	43	49	44	46	51	34	43	57.1
	Minimum...	31	31	34	39	35	37	39	17	16	34	36	31	34	26	30	37	38	39	28	29	28	26	19	21	27	22	26	25	15	20	14	28.6
Devils Lake	Maximum..	58	57	79	69	70	55	48	44	61	65	61	49	60	57	78	83	76	61	55	54	47	49	48	53	40	42	52	56	44	43	36	56.5
	Minimum...	42	36	40	40	37	38	33	30	31	38	39	28	30	24	39	42	46	35	32	30	27	24	26	25	25	22	26	25	18	19	16	31.1
Dickinson Airport...	Maximum..	61	71	81	69	67	71	58	49	72	71	67	69	73	66	82	82	75	55	56	54	49	50	42	51	43	64	56	56	50	53	51	61.7
	Minimum...	37	36	42	38	37	38	34	16	31	38	42	37	38	33	42	44	47	32	26	31	23	26	23	29	28	28	27	29	22	23	26	32.4
Dunn Center	Maximum..	59	69	83	68	65	69	51	46	71	71	64	65	71	64	81	82	75	56	56	55	48	46	44	50	42	60	58	54	50	52	49	60.5
	Minimum...	32	25	34	36	30	33	40	14	21	37	44	36	32	22	29	35	44	33	24	36	22	18	21	22	24	21	27	30	18	26	18	28.5
Fargo Airport	Maximum..	64	54	74	72	77	58	48	43	55	68	67	49	57	56	72	77	82	77	57	52	50	45	49	50	45	41	53	54	46	49	39	57.4
	Minimum...	39	38	39	41	35	42	38	28	28	32	38	29	22	29	36	42	46	38	34	31	29	22	35	25	28	22	25	37	23	18	13	31.7
Fessenden	Maximum..	60	67	81	72	67	60	51	41	65	66	64	54	63	56	80	82	73	66	68	63	52	45	40	48	45	40	54	53	44	41	36	58.0
	Minimum...	38	34	39	37	39	32	26	27	40	43	32	30	23	35	45	45	40	30	40	30	32	28	24	29	23	24	26	17	26	13	31.7	
Fullerton	Maximum..	65	60	74	72	78	65	55	45	56	68	68	55	66	60	71	79	82	72	60	54	50	44	49	55	49	54	63	62	55	56	46	60.9
	Minimum...	43	36	36	40	37	43	41	25	20	40	42	40	29	28	31	35	42	42	33	37	32	21	28	20	33	25	22	31	22	32	14	32.3
Garrison	Maximum..	61	68	84	70	68	69	51	54	68	71	65	62	68	63	81	84	77	45	55	58	48	48	44	53	44	52	54	56	49	48	43	60.0
	Minimum...	44	32	38	38	36	38	30	26	25	44	43	41	37	25	35	43	36	28	35	25	23	27	26	29	25	27	25	15	15	15	31.0	
Golva	Maximum..	63	75	81	68	67	73	63	53	73	72	69	69	73	72	81	82	75	54	56	55	49	49	46	51	43	69	55	53	52	56	58	63.1
	Minimum...	31	26	41	35	30	33	30	15	23	34	29	25	31	27	34	31	36	30	28	28	18	20	23	32	26	23	22	25	14	19	26	27.3
Grafton	Maximum..	65	54	74	72	73	65	56	41	55	66	63	59	59	53	78	81	78	70	55	54	51	48	47	54	50	44	51	57	54	43	35	58.3
	Minimum...	39	38	35	45	31	42	40	30	27	31	40	28	25	23	30	37	39	38	34	30	31	24	24	23	33	23	20	26	23	31	12	30.7
Grand Forks Airport.	Maximum..	63	53	74	70	75	59	48	43	54	67	65	48	55	55	76	78	79	74	55	53	48	48	44	52	46	41	51	55	45	45	35	56.6
	Minimum...	37	37	35	37	31	39	33	27	27	30	33	28	24	22	32	38	39	35	33	29	26	22	30	26	28	21	24	27	21	19	12	29.1
Jamestown Airport...	Maximum..	63	63	82	72	76	60	51	47	60	68	67	56	69	57	77	87	81	68	58	57	49	46	48	55	45	49	60	57	46	50	43	60.2
	Minimum...	38	37	33	40	35	40	28	22	23	38	39	31	27	24	30	35	42	36	34	33	27	21	24	19	28	23	20	28	18	14	12	29.0
Kenmare/	Maximum..	59	70	81	66	65	64	48	50	68	72	62	61	65	68	82	84	77	49	55	56	49	47	48	54	44	48	50	50	49	37	41	58.7
	Minimum...	44	35	40	41	40	39	40	23	25	35	41	39	38	27	43	48	47	42	32	31	21	27	23	23	30	26	29	27	18	23	14	32.6
Langdon	Maximum..	57	60	74	74	67	59	53	47	58	68	65	57	59	61	75	81	76	68	55	57	45	50	47	53	50	42	55	57	45	37	32	57.5
	Minimum...	40	35	37	34	30	34	36	22	26	29	30	21	27	22	32	39	40	38	37	25	27	19	24	21	28	16	21	25	17	15	28	9
Marmarth	Maximum..	64	73	81	70	69	75	55	50	75	74	70	72	77	75	83	84	78	57	63	63	50	50	35	55	47	70	48	56	57	53	60	64.2
	Minimum...	35	27	37	30	32	28	40	17	25	28	30	26	31	33	35	28	31	32	22	31	22	17	20	22	32	28	17	27	17	27	29	27.6
Minot Airport	Maximum..	59	66	83	67	68	67	47	47	67	70	62	56	65	62	82	84	77	46	54	56	47	47	43	55	44	49	49	54	48	45	41	58.3
	Minimum...	44	38	45	42	39	40	30	30	34	44	48	36	36	25	45	50	46	37	33	34	26	25	26	33	25	24	30	25	18	16	14	31.5
Mott	Maximum..	62	71	78	72	72	70	60	50	66	74	68	65	75	78	78	84	77	69	68	56	54	50	44	64	46	62	58	57	52	54	60	64.0
	Minimum...	32	30	32	32	32	33	32	16	26	30	26	32	37	28	25	37	41	35	20	42	30	15	25	14	30	25	25	18	20	30	15	27.9
Pembina Airport	Maximum..	53	52	71	69	70	57	44	40	54	62	60	44	51	52	78	77	78	57	54	51	44	50	46	52	42	47	47	45	42	39	35	53.7
	Minimum...	39	32	33	37	29	41	32	26	25	29	36	29	29	26	30	37	34	32	36	30	29	22	24	24	33	25	22	30	23	22	14	29.4
Sharon	Maximum..	54	57	76	70	73	60	50	45	56	67	64	55	61	54	77	84	77	53	55	55	49	45	48	52	44	42	58	54	47	46	40	57.1
	Minimum...	40	35	38	44	34	38	31	29	26	34	40	30	29	25	34	41	44	40	32	28	26	21	33	19	30	18	23	28	16	25	13	30.5
Steele	Maximum..	60	64	80	72	72	61	51	46	62	67	66	67	66	60	76	84	82	70	58	57	48	49	44	53	44	53	60	59	50	49	48	60.3
	Minimum...	37	34	40	38	38	37	19	22	40	46	39	32	35	33	39	40	40	25	32	25	18	27	17	27	20	22	25	14	14	10	30.4	
Valley City	Maximum..	66	59	76	74	76	65	57	46	59	68	67	57	63	60	77	85	82	75	59	56	53	46	47	53	50	47	59	56	53	50	40	60.7
	Minimum...	44	37	38	40	33	41	40	28	22	37	40	34	27	28	29	39	36	38	34	32	33	21	34	22	31	22	21	31	23	38	12	31.8
Wahpeton	Maximum..	66	57	77	76	78	56	48	56	71	69	63																					

Daily Precipitation for October 1945

[illegible]

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

57.05
NNT
V. 59"

Lat 34.12.

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIV BISMARCK, N. D., NOVEMBER 1945 No. 11

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GENERAL SUMMARY

November was a cold month. It was the coldest November since 1940 with sub-zero temperatures at most stations on the 9th and 10th and again from the 21st to 23d. Threshing was still under way at the beginning of the month but the precipitation from the 5th to the 8th, followed by sub-zero temperatures, ended most outdoor work. The precipitation was below normal in the eastern half of the state and slightly above normal in the western half with most of it occurring during the first half of the month. Less than one-fourth as much precipitation occurred during November 1945 as occurred during November 1944. Farm work was mostly completed by the close of the month and stock was generally in good condition. There was considerably less subsoil moisture at the close of November 1945 than at the close of November 1944.

TEMPERATURE

The mean temperature for the state was 22.3°, or 4.4° below the 1892-1945 average for November. The mean temperature for the eastern division was 23.2°; for the middle division, 21.0°; and for the western division, 22.8°. The highest mean temperature was 28.6° at Medora, and the lowest, 16.4° at Stanley, making a range in mean temperature of 12.2°. The absolute range was 101°, from 75° at Hettinger on the 4th, to -26° at Willow City on the 10th. The average daily deficiency in temperature for the state since January 1, 1945, is 0.0°.

PRECIPITATION

The average precipitation for the state was 0.48 inch, or 0.12 inch less than the 1892-1945 average for November. In the eastern division the average amount was 0.24 inch; in the middle division, 0.56 inch; and in the western division, 0.64 inch. The greatest monthly amount reported was 1.55 inches at Mohall; the least was a trace at Ashley. The greatest amount recorded in any 24 consecutive hours was 0.90 inch at Maddock on the 7th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 2.40 inches. The average snowfall was 5.3 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	3	1			6		26	11	3	1		29	39	2	10	23	36	27	28	19	7	4	2	2	5	12	9	35	23	16	24
Lunar halos ..																															
Solar halos ..																															
Sleet					3			2								1			1												
Thundrstm.																															

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck,	30.43	22	29.35	4	10.5	36	nw.	2	80	86	73	77	33	1229
Devils Lake, . . .	30.41	14	29.28	4	9.5	28	nw.	2	83	86	83	84	28	1370
Fargo,	30.42	10	29.29	4	14.4	38	nw.	22	85	88	77	81	24	1171
Williston,	30.52	22	29.33	1	6.2	26	nw.	1	84	85	77	83	32	1321

† And other dates.

COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	22.3	75	-26	0.80	0.95	0.61	0.79	7.4	4	8	9	13	
1893...	22.4	74	-27	0.72	0.75	0.24	0.57	4.6	3	9	10	11	
1894...	23.1	71	-25	0.44	0.54	0.43	0.47	2.6	4	10	8	12	
1895...	20.6	76	-25	1.18	1.01	1.08	1.09	8.2	5	8	9	13	
1896...	8.1	62	-32	2.06	2.47	2.17	2.23	21.7	9	8	8	15	
1897...	20.0	86	-28	0.27	0.33	0.36	0.32	2.8	3	12	9	9	
1898...	23.0	69	-30	0.42	0.30	0.30	0.34	3.1	3	13	8	9	
1899...	36.0	68	-2	0.26	0.51	0.16	0.31	1.0	2	15	4	11	
1900...	20.4	64	-29	0.28	0.29	0.40	0.32	5.2	5	14	7	9	
1901...	26.8	70	-7	0.10	0.09	0.19	0.13	1.6	1	15	8	7	
1902...	29.6	69	-12	0.25	0.11	0.36	0.24	1.9	3	11	6	13	
1903...	25.3	78	-20	0.27	0.22	0.28	0.26	2.5	2	13	4	13	
1904...	35.7	80	-10	0.10	0.09	0.07	0.09	0.7	1	18	5	7	
1905...	31.6	88	-38	1.66	1.54	0.89	1.36	11.0	9	7	13	10	
1906...	23.8	68	-16	1.90	1.34	1.23	1.49	10.2	7	10	7	13	
1907...	30.2	85	-15	0.08	0.10	0.05	0.08	0.7	1	16	8	6	
1908...	31.1	75	-15	1.10	0.91	0.80	0.94	8.2	4	12	8	10	
1909...	29.4	88	-23	0.68	0.31	0.44	0.48	4.6	3	11	9	10	
1910...	23.9	68	-23	0.34	0.44	0.43	0.40	3.2	2	8	10	12	
1911...	16.7	58	-33	0.70	0.60	0.63	0.64	7.1	6	12	8	10	
1912...	31.8	70	-1	0.09	0.06	0.06	0.07	0.5	1	14	9	7	
1913...	34.1	77	-2	0.21	0.23	0.21	0.22	1.6	2	15	8	7	
1914...	30.7	83	-30	0.45	0.31	0.23	0.33	2.6	2	13	10	7	
1915...	28.1	71	-10	0.81	0.83	1.21	0.95	3.7	4	10	10	10	
1916...	28.8	75	-18	0.10	0.25	0.46	0.27	1.7	2	16	8	6	
1917...	36.8	77	-7	0.20	0.13	0.05	0.13	1.4	1	16	6	8	
1918...	28.9	71	-18	1.31	1.09	0.49	0.96	5.3	4	13	6	11	
1919...	15.6	57	-36	1.88	0.96	0.62	1.15	11.8	5	11	8	11	
1920...	28.0	65	-14	0.55	0.33	0.14	0.34	2.1	3	10	9	11	
1921...	21.0	69	-30	0.52	0.71	0.83	0.69	6.3	5	7	8	15	
1922...	31.8	65	-8	2.97	2.26	1.50	2.24	6.3	6	7	7	16	
1923...	36.5	72	-5	0.58	0.45	0.39	0.47	0.6	3	13	8	9	
1924...	27.6	69	-15	0.19	0.17	0.17	0.18	1.9	2	11	9	10	
1925...	28.8	69	-17	0.42	0.17	0.13	0.24	1.3	2	14	8	8	
1926...	21.5	68	-23	0.72	0.54	0.60	0.62	6.2	5	6	7	17	
1927...	20.7	59	-24	0.71	0.72	0.65	0.69	7.1	6	7	8	15	
1928...	31.0	70	-11	1.08	0.28	0.09	0.48	0.2	1	15	8	7	
1929...	24.8	70	-21	0.57	0.46	0.56	0.53	5.2	5	9	8	13	
1930...	29.4	72	-21	1.56	0.62	0.43	0.87	6.2	5	13	7	10	
1931...	30.3	78	-10	0.98	0.40	0.27	0.55	5.0	3	13	7	10	
1932...	25.2	70	-17	0.70	0.38	0.45	0.51	4.6	4	10	10	10	
1933...	28.3	78	-15	0.81	0.58	0.56	0.65	6.6	5	9	8	13	
1934...	33.9	73	-1	0.51	0.22	0.10	0.28	1.0	3	13	7	10	
1935...	17.2	57	-25	0.70	0.79	0.69	0.73	8.1	6	8	8	14	
1936...	28.0	69	-28	0.37	0.33	0.31	0.34	4.0	4	13	8	9	
1937...	25.2	73	-25	0.51	0.40	0.33	0.41	3.5	4	10	7	13	
1938...	23.8	75	-21	0.63	0.94	1.04	0.87	7.9	6	8	10	12	
1939...	34.9	74	-4	0.04	0.02	0.02	0.03	T.	1	19	6	5	
1940...	22.0	59	-28	0.62	0.62	0.53	0.59	7.1	6	8	8	14	
1941...	30.5	69	-17	0.26	0.48	0.46	0.40	3.6	5	9	8	13	
1942...	28.0	73	-14	0.22	0.13	0.18	0.18	1.5	3	10	10	10	
1943...	28.7	73	-4	0.52	0.38	0.43	0.44	4.2	4	8	8	14	
1944...	27.1	70	-21	2.58	2.36	1.82	2.25	8.8	9	5	5	20	
1945...	22.3	75	-26	0.24	0.56	0.64	0.48	5.3	4	7	9	14	
Period	26.7	88	-38	0.71	0.59	0.51	0.60	4.7	4	11	8	11	

NAT.
HIST.

Climatological Data for November 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Carrington	Foster	1,579	48	19.8	-7.5	58	4	-6	10	0.27	-0.28	0.27	7	4.0	1	6	14	10	.....	Soo Line Agent.
Casselton	Cass	934	50	26.6	-0.4	59	4	-2	10	0.20	-0.48	0.18	12	T.	2	3	20	7	n.	C. Hayford.	
Cavalier	Pembina	894	38	19.8	.....	50	4	-15	20	0.42	-0.32	0.42	7	6.5	1	4	20	6	nw.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	.....	.....	.....	.....	0.02	-0.65	0.02	12	T.	1	6	18	6	nw.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	23.8	-3.5	58	4	-9	9	0.05	-0.59	0.05	14	1.0	1	4	2	24	nw.	R. J. Lockner	
Courtney	Stutsman	1,523	15	.....	.....	.....	.....	.....	.....	0.07	-0.50	0.03	9	2.0	3	6	9	15	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	19.4	-5.1	55	4	-10	10	0.53	-0.19	0.48	7	10.9	4	2	5	23	nw.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	45	24.6	-4.7	69	4	-6	10	0.02	-0.50	0.02	14	0.3	1	4	12	14	nw.	N. Dak. Agri. Exp. Sta.	
Edmore, 1 1/2 miles W.	Ramsey	1,524	22	17.6	-7.0	53	4	-22	10	0.51	-0.11	0.44	7	6.5	3	5	5	20	nw.	Mike Davis.	
Ellendale	Dickey	1,457	47	26.6	-1.8	69	4	-1	21	0.02	-0.54	0.02	14	0.3	1	6	9	15	s.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	65	26.0	-1.1	55	4	2	9	0.26	-0.64	0.16	12	1.9	4	1	8	21	s.	U. S. Weather Bureau.	
Forman	Sargent	1,249	54	26.1	-2.5	67	4	0	10	0.15	-0.42	0.15	12	1.0	1	9	12	9	nw.	Helge Dyste.	
Fullerton	Dickey	1,439	48	26.9	-2.1	69	4	1	9	0.06	-0.65	0.06	12	0.6	1	3	9	18	nw.	F. O. Alin.	
Gackle	Logan	1,951	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Walter Kranzler.
Grafton	Walsh	827	54	23.4	-1.6	55	4	-9	10	0.32	-0.37	0.22	8	3.4	2	4	7	19	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	55	23.8	-2.0	55	4	-1	9	0.13	-0.66	0.08	8-9	1.2	6	0	5	25	n.	University of N. Dak.	
Grand Forks Appt., 2 1/2 mi. W	Grand Forks	834	5	23.6	.....	56	4	-2	10	0.08	.....	0.05	7	1.1	3	2	2	26	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	25.2	-3.7	65	4	0	10	0.57	-0.08	0.29	13	2.0	3	3	6	21	nw.	Soo Line Agent.	
Hannah	Cavalier	1,568	52	17.2	-3.5	51	4	-14	10	0.96	+0.27	0.60	7-8	13.8	7	3	4	23	nw.	A. E. Prior.	
Hillsboro	Trail	901	40	25.6	-1.7	57	4	-2	10	0.07	-0.70	0.04	12	0.5	2	2	9	19	nw.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	54	22.6	-4.7	63	4	-5	9	0.11	-0.56	0.06	12	2.0	2	7	7	16	nw.	N. Dak. State Hospital.	
Jamestown Appt., 2 mi. NE	Stutsman	1,491	5	22.8	.....	64	4	-7	10	0.15	.....	0.08	12	1.7	7	1	7	22	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	22.0	.....	62	4	-9	10	0.11	.....	0.07	7	1.5	2	6	11	13	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	50	18.2	-5.5	52	4	-14	10	1.16	+0.43	0.43	7	10.8	11	4	5	21	nw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	53	22.8	-3.0	67	4	-7	10	0.01	-0.81	0.01	9	0.1	1	5	10	15	nw.	Jesse P. Phillips.	
Lisbon	Ransom	1,091	42	26.6	-2.2	65	4	-2	10	0.09	-0.54	0.08	12	T.	2	5	5	20	nw.	J. O. Halverson.	
Mayville	Trail	975	50	25.4	-2.4	57	4	0	10	0.05	-0.66	0.04	12	0.2	2	3	10	17	nw.	H. A. Ragaz.	
McHenry, 3 miles NE	Eddy	1,509	23	20.2	-6.4	57	4	-15	10	0.14	-0.40	0.06	7	1.9	3	2	7	21	nw.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	34	28.1	-1.6	64	4	-1	10	0.24	-0.39	0.17	12	1.0	2	6	11	13	nw.	J. G. Carlson.	
McVille	Nelson	1,467	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. M. Casad.
Milnor	Sargent	1,117	13	23.8	.....	65	4	-2	9	0.41	-0.18	0.32	12	2.0	2	.....	22	2	nw.	E. W. Wilson.
Oakes	Dickey	1,318	17	25.7	-2.9	69	4	1	9	0.07	-0.49	0.03	7	0.5	4	6	10	14	nw.	H. M. Blazer.	
Park River	Walsh	998	42	19.0	-8.0	50	4	-11	10	0.22	-0.41	0.22	7	3.0	1	7	3	20	nw.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	795	72	20.2	-3.2	49	4	-12	10	0.54	-0.21	0.30	7	9.5	9	0	5	25	nw.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	15	19.2	.....	57	4	-10	10	0.08	-0.56	0.06	7	1.2	2	3	10	17	nw.	T. C. Overland.
Sharon	Steele	1,516	22	22.4	-2.3	58	4	-7	10	0.04	-0.68	0.03	14	0.6	2	1	10	19	nw.	Nels O. Gretsheim.	
Valley City	Barnes	1,229	41	25.4	-2.6	61	4	-2	10	0.10	-0.53	0.04	14	1.2	4	3	8	19	se.	Hettie Blythe.	
Wahpeton	Richland	962	54	28.1	-0.9	61	4	3	9	0.41	-0.28	0.22	12	1.0	3	8	6	16	nw.	State School of Science.	
Average for Eastern Division				23.2	-3.6	69	4	-22	10	0.24	-0.47	0.60	7-8	2.6	3	4	9	17	nw.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,025	50	25.0	-3.0	68	4	-4	9	T.	-0.55	T.	7	T.	0	6	10	14	nw.	U. S. Airway Comm. Sta.	
Belcourt	Rolette	1,900	1	16.9	.....	54	4	-20	10	0.34	.....	0.18	7-8	5.3	3	4	14	12	s.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	43	17.5	-8.9	54	4	-15	10	0.67	+0.20	0.34	7	10.5	3	4	3	23	nw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	71	24.9	-3.6	68	4	-5	9	0.43	-0.05	0.43	7	4.5	2	4	7	19	nw.	U. S. Weather Bureau.	
Bismarck Appt., 2 1/2 mi. SE	Burleigh	1,650	6	23.9	-2.6	69	4	-11	9	0.27	-0.30	0.26	7	4.6	2	4	7	19	nw.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	54	18.2	-5.4	54	4	-19	10	0.51	+0.04	0.15	8	4.8	7	6	7	17	nw.	N. D. School of Forestry.	
Butte, 3 miles WSW	McLean	1,880	21	21.6	-4.9	58	4	-10	10	0.80	+0.20	0.52	7-8	8.2	6	5	6	19	nw.	R. L. Williams.	
Carson, 2 miles SW	Grant	2,500	34	22.4	-7.4	72	4	-14	9	0.65	+0.08	0.60	7	6.9	2	8	11	11	nw.	J. W. Evans.	
Center	Oliver	2,100	8	21.4	.....	66	4	-14	9	0.78	.....	0.53	7	11.3	6	9	7	14	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	19.5	-6.4	58	4	-10	10	0.73	+0.19	0.50	8	6.8	5	15	9	6	nw.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	50	.....	.....	54	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	State Tuberculosis San.
Eckman	Bottineau	1,500	40	17.2	-8.2	50	4	-21	10	0.73	+0.24	0.29	7-8	7.0	7	6	9	15	nw.	E. R. Sherman.	
Fessenden	Wells	1,610	34	18.4	-8.2	54	4	-14	10	0.80	+0.20	0.60	7	8.3	6	9	10	11	nw.	John V. Zuber.	
Fort Yates	Sioux	1,670	46	27.2	-2.8	72	4	-7	9	0.50	+0.05	0.04	7	6.0	1	16	9	5	nw.	P. J. Jacobson.	
Foxholm, 6 1/2 miles NE	Ward	1,657	25	19.6	-6.0	54	4	-15	10	0.53	-0.15	0.21	5-6	11.3	6	8	2	20	nw.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	69	21.0	-5.5	63	4	-8	9	0.81	+0.32	0.48	7	7.4	4	5	8	17	nw.	Mae H. Vorachek.	
Granville	McHenry	1,504	39	19.5	-6.9	56	4	-14	10	0.72	+0.18	0.34	7	10.2	6	12	5	13	nw.	Fred Roble.	
Hansboro	Towner	1,597	38	22.0	-1.5	53	4	-12	10	0.32	-0.22	0.17	7	9.7	5	5	4	21	nw.	W. E. Disher.	
Harvey, 3 miles SE	Wells	1,596	43	.....	.....	.....	.....	.....	.....	0.43	-0.15	0.43	7	8.0	1	7	12	11	se.	H. J. Reynolds.
Leeds	Benson	1,515	5	19.3	.....	55	4	-10	10	0.43	.....	0.25	8	8.0	2	8	4	18	w.	John Dalmage.
Linton	Emmons	1,711	29	26.7	-2.1	70	4	-5	9	0.05	-0.40	0.05	7	0.5	1	9	7	14	nw.	Wm. Heyerman.	
Maddock, 1 mile E	Benson	1,604	31	19.2	-7.0	55	4	-17	10	1.03	+0.52	0.90	7	12.1	4	3	8	19	nw.	Benson Cy. A. & T. Sch.	
Mandan, 1 1/2 miles SW	Morton	1,750	32	23.0	-5.9	69	4	-8	9	0.53	+0.01	0.30	7	7.0	2	8					

Climatological Data for November 1945—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	53	22.0	-6.4	64	4	-11	23	0.81	+0.41	0.30	7	6.0	6	9	10	11	nw.	H. W. Case.
Epping	Williams	2,224	37	19.8	-6.5	58	4	-18	9	0.68	+0.25	0.21	6	12.0	5	12	5	13	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	17							0.63	+0.18	0.40	5	1.5	2	12	5	13	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	28	27.2		72	4	-13	9	0.54	+0.06	0.35	7	5.0	4	4	14	12	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	5	25.6	-5.1	71	4	-14	9	0.30	-0.16	0.24	7	3.7	5	5	12	13	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	21.4	-4.7	53	4	-14	9	0.84	+0.29	0.41	8	10.7	5	10	15	5	w.	L. D. Nielson.
Halliday	Dunn	2,073	4							0.89		0.32	7-8	7.5	6	7	13	10	nw.	John Kisse.
Hettinger	Adams	2,675	39	27.0	-4.4	75	4	-12	9	0.47	+0.07	0.47	7	7.0	1	14	12	4	nw.	Edgar Martin.
Kenmare	Ward	1,799	14	19.4	-6.9	54	4	-9	10	1.23	+0.69	0.51	5	8.7	10	14	5	11	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	27.4	-3.5	73	4	-15	9	0.40	+0.03	0.35	7	5.0	2	9	8	13	nw.	S. P. Grane.
Medora	Billings	2,271	31	28.6		73	4	-16	9	0.19	-0.29	0.16	7-8	2.1	3	17	4	9	w.	Harry Roberts.
Mott	Hettinger	2,424	39	25.6	-3.7	70	4	-13	9	0.83	+0.37	0.63	7	8.0	2	16	11	3	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	54	26.6	-2.8	73	4	-14	9	0.57	+0.12	0.55	8	8.2	3	9	11	10	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		4	25.4		70	4	-13	9	0.39		0.21	7-8	2.4	6	15	6	9	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	31	20.0	-5.5	60	4	-15	9	0.47	+0.08	0.20	7	5.9	5	5	14	11	nw.	C. E. Shubert.
Portal	Burke	1,954	32	16.6	-8.4	52	4	-15	9†	0.91	+0.39	0.31	1	6.0	4	5	10	15	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	18.6	-6.8	52	4	-10	10†	0.50	+0.31	0.30	6†	8.5	4	8	7	15	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	30	24.8	-3.9	68	4	-12	9	0.72	+0.20	0.58	7	6.0	2	9	4	17	nw.	Assumption Abbey.
Ryder	Ward	2,108	17							0.67	+0.14	0.32	7	9.8	5	7	7	16	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	19.1	-8.9	62	4	-12	23	0.78	+0.25	0.44	7	8.0	4	1	11	18	w.	H. J. Bugge.
Stanley	Mountrail	2,258	8	16.4		53	4	-17	9	0.85		0.34	6	9.7	5	7	11	12	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	17							0.59	+0.06	0.27	5-6	5.9	7	10	9	11	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	17							0.63	+0.17	0.35	6	6.8	4	7	6	17	nw.	L. A. Simon.
Trotters	Golden Valley		20							1.01	+0.56	0.51	5	4.9	6	2	21	7	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	21.4		67	4	-12	9†	0.61		0.18	4-5	8.1	6	5	15	10	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	21.9	-6.6	62	4	-17	9	1.65	+1.16	0.52	5	10.9	8	8	12	10	nw.	J. C. Zeller.
Wildrose	Williams	2,258	16							0.77	+0.27	0.30	8	8.0	5	13	11	6	s.	Jonathan Winkjer.
Williston	Williams	1,878	67	21.0	-6.2	61	4	-12	9	1.18	+0.60	0.71	5-6	9.0	7	5	4	21	w.	U. S. Weather Bureau.
Average for Western Division				22.8	-5.8	75	4	-18	9	0.64	-0.13	0.71	5-6	6.2	4	9	9	12	nw.	
Average for the State				22.3	-4.4	75	4	-26	10	0.38	-0.12	0.90	7	5.3	4	7	9	14	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

† Trace, precipitation 0.005 inch or less.

† And other dates.

† Best available used for stations not equipped with recorders.

Daily Temperatures for November 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum...	46	35	32	68	48	32	27	22	15	42	43	36	29	34	42	31	46	44	41	29	10	17	37	34	36	45	33	40	45	41	.....	36.0
	Minimum...	29	16	10	29	24	25	19	2	-4	6	22	17	17	19	17	26	18	13	13	5	-2	2	-3	9	10	8	18	19	21	15	.....	14.0
Bismarck Airport	Maximum...	49	35	35	69	46	30	26	20	9	28	28	23	27	32	35	32	38	39	30	8	14	41	32	41	43	33	42	40	38	.....	33.2	
	Minimum...	28	17	11	35	27	26	20	1	-11	-9	7	16	20	15	15	29	22	18	18	5	-1	1	-3	15	22	19	18	16	22	20	.....	14.6
Bottineau	Maximum...	36	34	31	54	48	29	27	20	15	20	30	33	32	15	23	26	19	20	29	28	14	18	21	26	26	28	27	35	31	34	.....	27.6
	Minimum...	30	21	9	24	26	22	19	8	-10	-19	0	15	0	-8	11	16	5	3	18	12	-7	-9	-10	2	0	20	11	18	21	14	.....	8.7
Carson	Maximum...	50	38	32	72	48	28	26	20	5	26	24	18	24	30	33	32	35	38	36	34	11	12	30	32	36	37	39	39	36	35	.....	31.9
	Minimum...	31	16	7	29	22	22	12	0	-14	-1	10	14	7	15	19	19	14	15	21	-8	-5	-3	-1	14	19	20	19	28	25	22	.....	13.0
Crosby	Maximum...	34	26	46	52	34	26	14	6	16	23	20	23	17	24	18	21	22	30	36	15	5	11	28	30	37	37	36	39	36	34	.....	26.5
	Minimum...	27	19	9	10	30	20	11	5	-10	-13	10	12	-7	-14	-7	10	8	9	14	11	-8	-8	-6	9	18	32	20	19	21	25	.....	9.2
Devils Lake	Maximum...	39	29	30	55	36	28	25	20	4	28	34	31	22	23	28	28	18	22	28	27	8	10	26	19	21	24	28	33	31	31	.....	26.2
	Minimum...	28	21	18	27	25	24	20	2	-6	-10	10	18	12	-4	19	18	3	0	21	3	-3	0	-5	9	15	18	22	22	21	28	.....	12.5
Dickinson Airport	Maximum...	46	36	44	70	46	28	23	10	11	30	26	30	27	29	31	31	40	40	25	10	18	44	38	38	43	48	50	47	40	.....	34.6	
	Minimum...	25	14	11	39	28	23	6	-5	-12	8	9	6	16	13	19	16	15	22	21	2	-3	-4	1	18	21	27	25	32	28	26	.....	14.9
Dunn Center	Maximum...	46	34	32	66	50	32	27	20	12	27	22	31	24	28	26	31	30	40	43	34	11	14	41	35	37	43	42	46	42	40	.....	33.5
	Minimum...	30	18	11	32	31	25	20	3	-8	-5	10	0	16	14	10	24	25	5	18	9	-4	-5	-5	13	18	26	23	21	23	24	.....	14.1
Fargo Airport	Maximum...	48	37	31	55	39	40	34	28	15	44	41	41	29	34	41	35	43	42	31	6	-1	-5	-1	7	6	5	17	12	15	18	.....	32.8
	Minimum...	34	23	17	28	26	28	9	2	2	34	25	16	19	18	26	16	8	20	16	8	11	5	15	21	21	21	26	24	27	30	.....	19.2
Fessenden	Maximum...	36	28	38	54	43	25	25	20	7	25	25	24	21	24	27	27	20	26	28	27	8	5	24	26	24	33	27	36	28	29	.....	26.3
	Minimum...	27	23	12	24	26	24	18	6	-7	-14	4	16	10	11	13	19	10	11	6	-1	-5	-1	-7	6	5	17	12	15	18	19	.....	10.6
Fullerton	Maximum...	48	42	32	69	55	35	34	29	19	45	47	43	34	28	41	35	43	42	31	36	15	17	34	32	35	30	29	33	47	42	.....	36.5
	Minimum...	29	32	15	18	29	25	26	19	1	1	27	24	22	17	18	28	28	17	22	15	1	5	2	15	7	13	12	25	17	20	.....	17.3
Garrison	Maximum...	40	29	35	63	39	27	26	17	7	24	23	23	22	24	29	30	23	33	37	22	6	9	32	31	36	39	34	34	36	37	.....	29.1
	Minimum...	26	15	9	35	25	22	17	2	-8	-8	10	9	14	10	14	23	15	13	17	2	-4	-5	-6	12	21	23	22	17	22	23	.....	12.9
Golva	Maximum...	47	36	47	71	49	31	22	11	21	32	29	35	33	36	37	35	45	44	47	25	14	20	49	48	43	45	54	59	59	41	.....	38.8
	Minimum...	26	11	9	36	29	19	7	-6	-14	5	3	4	10	5	18	13	21	20	24	2	-2	-6	-1	18	16	24	22	22	21	24	.....	12.4
Grafton	Maximum...	40	37	45	55	48	31	31	27	20	32	31	32	29	21	27	30	22	19	29	30	22	15	29	27	24	35	29	32	34	35	.....	30.6
	Minimum...	28	21	22	18	29	27	24	18	4	-9	13	26	15	8	11	19	12	0	4	20	9	9	-1	16	20	20	24	24	23	29	.....	16.1
Grand Forks Airport	Maximum...	42	35	31	56	37	33	30	26	10	37	44	38	25	26	32	36	24	24	30	15	15	28	24	25	27	30	30	36	36	.....	30.5	
	Minimum...	31	24	19	24	27	27	25	7	-2	-2	18	24	14	15	21	18	6	2	11	14	9	8	3	16	20	20	25	20	28	29	.....	16.7
Jamestown Airport	Maximum...	46	34	32	64	41	34	28	22	10	39	45	30	28	25	35	33	28	26	30	26	8	10	36	28	26	28	27	37	33	32	.....	30.7
	Minimum...	30	20	14	28	24	24	22	4	-6	-7	20	20	16	16	16	24	17	13	21	4	-1	5	0	12	14	16	12	24	21	21	.....	14.8
Kenmare	Maximum...	35	28	45	54	35	26	24	12	16	26	19	24	18	25	22	21	24	35	39	16	8	18	30	32	37	40	35	45	35	35	.....	28.6
	Minimum...	25	23	13	13	31	20	16	7	-7	-9	8	14	0	-7	-6	11	11	11	13	12	-6	-6	-3	13	18	20	24	21	21	19	.....	10.3
Langdon	Maximum...	36	32	32	52	46	26	20	12	22	27	26	22	14	20	25	20	13	23	26	13	11	22	23	20	20	21	27	28	29	31	.....	24.8
	Minimum...	26	19	17	19	25	21	18	12	-2	-14	12	19	10	-6	10	15	-2	-7	11	13	1	4	-7	11	14	17	19	23	23	26	.....	11.6
Marmarth	Maximum...	50	39	43	73	57	46	25	17	33	31	35	33	37	38	41	45	46	45	34	20	30	48	48	48	42	45	55	52	58	43	.....	41.1
	Minimum...	27	17	11	35	33	25	15	3	-15	3	2	10	8	8	17	16	14	24	14	2	4	0	20	12	27	22	24	24	20	20	.....	13.8
Minot Airport	Maximum...	42	28	36	55	42	25	23	19	1	23	19	25	20	30	30	24	18	26	36	29	5	4	19	30	30	38	30	36	34	35	.....	27.1
	Minimum...	26	12	12	34	23	20	19	1	-7	-7	10	15	1	5	12	16	11	10	12	0	-7	-3	-5	10	14	24	24	19	18	21	.....	11.3
Mott	Maximum...	46	40	50	70	50	42	35	30	13	30	32	30	30	32	34	35	38	42	44	30	24	28	38	37	40	42	44	46	46	38	.....	38.0
	Minimum...	28	14	10	36	10	22	15	4	-13	9	10	4	16	10	13	13	4	15	18	10	10	14	10	15	10	16	15	23	22	18	.....	13.2
Pembina Airport	Maximum...	40	33	27	49	34	30	26	24	12	27	34	34	22	21	26	28	14	20	30	30	14	15	24	24	23	26	29	24	34	33	.....	27.1
	Minimum...	30	20	19	21	24	24	23	11	-9	-12	11	20	6	2	13	11	-3	-6	6	13	7	8	-1	14	19	20	24	25	28	27	.....	13.2
Sharon	Maximum...	40	36	33	58	40	34	28	23	12	34	40	31	30	29	30	32	30	20	28	28	14	10	30	28	23	32	29	30	29	33	.....	29.8
	Minimum...	27	22	17	16	27	26	23	12	-2	-7	23	22	11	4	16	22	12	0	17	14	2	6	2	17	20	13	22	22	18	27	.....	15.0
Steele	Maximum...	45	36	31	66	55	31	29	22	10	33	36	34	28	29	35	32	33	36	38	14	14	11	35	32	41	41	32	49	42	37	.....	34.2
	Minimum...	33	18	7	22	32	24	20	13	-9	-8	13	20	18	10	14	27	22	17	16	11	-5	0	-7	2	17	12	14	16	18	16	.....	13.3
Valley City	Maximum...	47	39	34	61	53	35	34	28	12	41	44	44	30	32	35	35	30	26	31	30	18	14	33	27	24	27	30	35	35	39	.....	33.3
	Minimum...	29	24	19	18	30	25	25	17	1	-2	25	24	20	15	15	29	23	11	22	16	4	4	1	17	16	19	13	18	21	28	.....	17.6
Wahpeton	Maximum...	51	48	36	61	52	44	41	36	23	43	45	47	32	28	38	42	36	30	34	34	25	16	28	26	25	34	34	36	32	37	.....	36.5
	Minimum...	32	25	18	18	28	23	23	20	3	4	38	28	22	16	20	35	25</															

Daily Precipitation for November 1945

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James Red.							.02							T.																		0.27
Casselton	do							T.						T.	.18																		0.20
Cooperstown	Sheyenne							T.						T.		.05																	0.05
Courtney	James							.01						T.		.03																	0.07
Devils Lake ^{1 5}	Devils Lake	T.	T.	T.	T.		T.	.01	.48	T.				T.		.03	.01		T.	T.		T.	T.			T.	T.		T.	T.			0.53
Edgeley	James							T.																									0.02
Edmore	Devils Lake	.02	T.			T.			.44	T.							.05	T.	T.														0.51
Ellendale	James																																0.02
Fargo ^{1 5}	Red.	T.	T.	T.			T.	.03	T.					T.	.16	T.	.05			T.		T.	T.	T.	.02	T.	T.	T.					0.26
Forman	Sheyenne						T.	T.	T.																								0.15
Fullerton	James							T.	T.					T.	.15	.06						T.	T.						T.	T.			0.06
Gackle	do																																
Grafton	Red.	T.			T.		T.	.10	.22						T.				T.				T.	T.		T.	T.						0.30
Grand Forks Airport ³	do		T.	T.	.01			.05	T.						.02	T.			T.				T.	T.	T.	T.	T.						0.08
Haukinson ²	do	.24							.04						.29								T.	T.	T.	T.	T.						0.57
Hannah	Pembina	T.	T.					.02	.30	.30					T.			.10					.20	.02	.02								0.96
Hillsboro	Red.							T.	.02						T.	.04																	0.06
Jamestown Airport ³	James				T.		T.	.01	T.						.08	.02			T.	T.			.01	.01	.01								1.15
Langdon	Pembina		.02				.07	.43	.35		.03			T.	T.			.10															0.16
Larimore	Red.						T.	T.	T.		.01																						0.01
Lisbou	Sheyenne							T.	T.						.08	.01									T.								0.09
Mayville	Red.	T.	T.				T.	T.	T.						.04																		0.05
McHenry	James						T.	.06	.04							.04																	0.14
McLeod	Sheyenne						T.		.07						.17																		0.24
Oakes ²	James						T.	.01	.03						T.	.01	.02																0.07
Park River	Red.						T.	.22										.02	T.														0.22
Pembina Airport ³	do	.09	T.	T.	.01		.01	.30	T.				.04	.02	T.	T.			.02	T.			.04	T.	T.	T.	T.						0.54
Petersburg	do	T.	T.				T.	.06	.02						T.	T.	.03																0.08
Sharon	do	T.	T.				T.	.01	T.						.03		.03																0.04
Valley City	Sheyenne	T	T.		T.	T.	T.	.02	T.						.03	T.	.04																0.10
Wahpeton	Red.	.18						.01	T.						.22									T.									0.41
Middle Division																																	
Ashley ³	Missouri								T.	T.					T.								T.	T.	T.								T.
Bisbee	Devils Lake	.04					.29	.34																									0.67
Bismarck Airport ^{1 5}	Missouri	T.			T.	T.	.26	T.					T.	T.	.01	T.			T.	T.			T.	T.									0.27
Bottineau ²	Mouse	.03				.09	.11	.15							.02	.01							.10										0.51
Butte	do		.06		.03	.10	.47	.05							T.		T.	T.															0.80
Carson	Heart	.05					.60																										0.65
Center	Missouri				.15	.07	.53	T.							.01	.01	T.																0.78
Drake ²	Mouse					.11	T.	.50							.05		.03						.04										0.73
Dunseith	do																																
Eckman	do	.03				.19	.09	.20									.05																
Fessenden	James		T.		.08	T.	.60	.04									.03	.02															0.73
Fort Yates	Missouri						.50																										0.80
Foxholm	Mouse	T	T.		.03	.18	.14	.09							T.	.04	T.	T.					.05										0.50
Garrison ³	Missouri	T	T.		.27	T.	.48								.05	T.																	0.53
Granville	Mouse	T	T.		.05	.12	.34	.04							.06																		0.81
Hansboro	Devils Lake	.03	T.		.05	.04	.17	.04							T.																		0.72
Linton	Missouri						.05	T.																									T.
Maddock	Sheyenne	T.				.04	.81	.09									.09	T.															0.32
Mandan ²	Missouri				T.	T.	.30	.23							T.																		0.05
Max ²	do	T.			.02	.18	.30	.23									.08																1.03
McClusky	do	T.			.05		.72										.05																0.53
Minot Airport ³	Mouse	T	T.		.26	.11	.31	.01							T.	.01	.03	.01	T.	T.													0.51
Mohall	do	.05				.56	.32	.36							T.	.04	.05																0.82
Napoleon	Missouri						.43	.05							.03	.04	T.																0.78
New Salem	Heart.				T.		T.								.08																		1.55
Pettibone	James						.11										.04																0.08
Rolla	Devils Lake	T.	T.				.14	.58	.15						.05	.06	.02																0.51
Rugby	Mouse	T.				.10	.30	.10																									0.15
Selfridge	Missouri						.32	T.							T.																		T.
Steele	do				T.		.14										.05																0.65
Towner	Mouse				.10		.30										.04																0.37
Turtle Lake	Missouri	T.			T.		.62								T.																		0.18
Tuttle	do				.04	.03	.27	.12							.05		.06																0.40
Underwood	do	T.			.15	T.	.50	.07							T.		T.																0.62
Velva	Mouse	T.	T.		.06	.16	.43	.10							T.		T.	.02															0.58
Washburn	Missouri	T.			.17	.03	.45								T.		T.		.02														0.72
Westhope	Mouse				.29	.33	.17								T.																		0.88
Willow City	do		T.			.28	.25	.12							T.	.16																	0.70
Wishek ²	Missouri					T.	T.	T.							T.	.08																	0.81
Western Division																																	
Alpha	Lit. Missouri					T.		.34	T.																								0.34
Amidon	do					.10		.48	T.																								0.10
Bowman ²	Grand					T.																											0.48
Crosby ²	Mouse	.10	.01		T.		.18		.09																								

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

1.05
NT

54¹²

Not list

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MAR 11 1946

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIV BISMARCK, N. D., DECEMBER 1945 No. 12

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GENERAL SUMMARY

Temperatures during the first and fourth weeks were mild but unusually cold weather prevailed from the 9th to the 24th. At many stations the minimum temperatures were below zero every night during this 16-day period, and the maximum temperatures on a few days were also below zero. The northeastern part of the state was much colder than the southwestern part with some stations in the extreme southwestern counties averaging 10° to 14° warmer for the entire month than stations in the extreme northeastern counties. A snowstorm, with heavy falls in the northeastern and north-central counties, occurred on the 8th, but otherwise the precipitation was light from the 1st to the 19th. Moderate amounts of snowfall occurred at most stations from the 20th to the end of the month with moderate blizzard conditions at many places on a few days. The month, especially in the eastern division, was very foggy. Livestock were mostly in good condition but much barn and yard feeding was necessary due to snow cover.

TEMPERATURE

The mean temperature for the state was 7.0°, or 6.4° below the 1892-1945 average for December. The mean temperature for the eastern division was 5.8°; for the middle division, 5.6°; and for the western division, 9.4°. The highest mean temperature was 16.2° at Bowman, and the lowest, 1.0° at Willow City, making a range in mean temperature of 15.2°. The absolute range was 94°, from 56° at Hettinger, Medora, and New England on the 5th, to -38° at Willow City on the 11th. The average daily deficiency in temperature for the state since January 1, 1945, is 0.6°.

PRECIPITATION

The average precipitation for the state was 0.64 inch, or 0.17 inch more than the 1892-1945 average for December. In the eastern division the average amount was 0.83 inch; in the middle division, 0.64 inch; and in the western division, 0.46 inch. The greatest monthly amount reported was 1.49 inches at Grafton; the least was 0.10 inch at Hettinger and Mott. The greatest amount recorded in any 24 consecutive hours was 0.80 inch at Bisbee and Tioga on the 7-8th. The accumulated deficiency in precipitation for the state since January 1, 1945, is 2.23 inches. The average snowfall was 8.8 inches.

MISCELLANEOUS PHENOMENA

(Dates and number of stations reporting)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Fogs	51	48	25	2	2	4	3	1	2	2	6	1	2	1	1	1	1	1	1	1	1	1	3	13	19	23	17	30	24	18	31
Lunar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Solar halos ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sleet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Thundrstsms ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.62	22	29.44	7	9.0	29	nw.	8	85	84	79	82	44	1740
Devils Lake...	30.74	22	29.40	5	8.1	29	n.	8	76	77	72	78	34	1917
Fargo.....	30.73	22	29.44	5	11.6	40	n.	8	85	86	79	82	34	1804
Williston.....	30.60	17	29.40	5	6.0	23	n.	8	82	84	82	83	23	1733

† And other dates.

COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	7.1	60	-39	0.44	0.49	0.78	0.57	7.7	4	13	8	10	
1893...	4.7	55	-36	0.71	0.83	1.02	0.85	8.4	6	11	9	11	
1894...	19.1	70	-32	0.38	0.17	0.32	0.29	1.6	2	18	7	6	
1895...	13.8	62	-32	0.24	0.29	0.39	0.31	2.6	2	12	9	10	
1896...	16.4	63	-35	0.50	0.46	0.13	0.36	2.6	3	13	9	8	
1897...	10.8	59	-35	0.24	0.21	0.21	0.22	2.2	3	12	8	11	
1898...	12.1	51	-38	0.24	0.24	0.24	0.24	2.1	3	14	7	8	
1899...	12.8	60	-26	0.31	0.31	0.34	0.32	3.3	3	13	7	11	
1900...	17.3	55	-29	0.35	0.29	0.29	0.31	3.0	4	13	8	10	
1901...	12.4	61	-43	0.72	0.74	0.75	0.74	7.2	5	10	7	14	
1902...	7.8	49	-35	0.50	0.30	0.72	0.51	4.2	4	14	7	10	
1903...	11.6	57	-33	0.63	0.74	0.93	0.77	7.2	6	11	7	13	
1904...	14.2	55	-43	0.60	0.62	0.73	0.65	6.2	5	7	8	16	
1905...	15.3	55	-34	0.21	0.16	0.12	0.16	1.6	4	16	2	13	
1906...	8.4	48	-40	1.09	0.91	1.27	1.09	10.7	6	11	7	13	
1907...	20.1	68	-26	0.36	0.23	0.31	0.30	3.1	3	15	7	8	
1908...	14.4	62	-37	0.53	0.26	0.28	0.36	3.7	3	13	10	8	
1909...	5.2	54	-42	1.88	1.10	0.86	1.28	12.1	7	9	8	14	
1910...	12.9	56	-34	0.45	0.42	0.42	0.43	4.6	4	12	8	11	
1911...	14.9	61	-33	0.45	0.26	0.34	0.35	4.5	4	10	8	13	
1912...	18.9	72	-28	0.62	0.55	0.13	0.43	4.0	4	14	8	9	
1913...	22.7	61	-21	0.05	0.12	0.01	0.06	0.3	1	18	6	7	
1914...	5.4	57	-42	0.58	0.40	0.42	0.47	5.7	4	12	9	10	
1915...	15.8	57	-27	0.56	0.56	0.44	0.52	5.4	5	11	9	11	
1916...	2.7	61	-50	1.39	1.34	0.81	1.18	13.9	5	15	8	8	
1917...	0.7	58	-44	0.51	0.64	0.61	0.59	7.4	6	9	9	13	
1918...	18.5	65	-41	0.97	0.92	0.76	0.88	9.9	5	9	8	14	
1919...	7.4	49	-38	0.65	0.48	0.28	0.47	4.8	3	14	9	8	
1920...	15.2	59	-32	0.48	0.33	0.16	0.32	3.2	3	11	9	11	
1921...	16.5	59	-33	0.52	0.33	0.38	0.41	3.9	4	14	7	10	
1922...	8.5	55	-34	0.75	0.76	0.53	0.68	7.4	5	11	8	12	
1923...	22.2	62	-36	0.38	0.35	0.23	0.32	3.6	3	16	8	7	
1924...	2.9	58	-46	0.40	0.39	0.54	0.44	5.3	4	12	7	12	
1925...	16.5	67	-38	0.24	0.30	0.30	0.28	2.6	3	12	8	11	
1926...	9.2	55	-36	0.60	0.50	0.59	0.56	5.5	3	14	8	9	
1927...	1.8	43	-38	0.96	0.52	0.91	0.80	8.7	5	14	7	10	
1928...	20.7	57	-30	0.47	0.23	0.27	0.32	3.2	3	14	7	10	
1929...	12.5	59	-38	0.68	0.88	0.88	0.81	9.9	5	12	8	11	
1930...	19.9	53	-30	0.21	0.16	0.21	0.19	2.0	3	12	8	11	
1931...	21.0	58	-21	0.25	0.15	0.29	0.23	2.7	2	13	8	10	
1932...	12.4	60	-31	0.17	0.14	0.28	0.20	1.7	3	14	10	7	
1933...	8.6	62	-38	1.09	0.79	0.83	0.90	9.7	6	9	8	14	
1934...	12.6	53	-44	0.40	0.22	0.29	0.30	3.9	5	9	8	14	
1935...	12.6	51	-34	0.65	0.52	0.34	0.50	5.6	5	10	7	14	
1936...	15.0	59	-36	0.50	0.32	0.46	0.43	5.5	4	11	8	12	
1937...	11.4	51	-33	0.62	0.51	0.49	0.54	6.5	6	10	9	12	
1938...	18.2	55	-41	0.40	0.30	0.26	0.32	4.1	4	11	10	10	
1939...	26.7	70	-20	0.27	0.30	0.27	0.28	2.3	4	10	10	11	
1940...	19.8	59	-36	0.79	0.28	0.19	0.42	4.0	4	10	7	14	
1941...	22.5	66	-20	0.15	0.17	0.14	0.15	1.8	3	10	11	10	
1942...	10.9	53	-30	0.67	0.52	0.39	0.53	7.1	7	7	8	16	
1943...	21.5	65	-22	0.15	0.12	0.10	0.12	1.0	2	16	9	6	
1944...	15.8	50	-27	0.08	0.05	0.04	0.06	0.9	1	13	10	8	
1945...	7.0	56	-38	0.83	0.64	0.46	0.64	8.8	6	8	8	15	
Period	13.4	72	-50	0.53	0.44	0.44	0.47	5.0	4	12	8	11	

Climatological Data for December 1945

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours †	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																			
Carrington	Foster	1,579	48	4.2	-8.4	42	6-26	22	1.14	+0.73	0.50	8†	16.2	7	11	9	11	.....	Soo Line Agent.
Casselman	Cass	934	50	8.0	-4.8	45	6-23	11†	0.51	-0.01	0.34	23	7.4	6	8	15	3	nw.	C. Hayford.
Cavalier	Pembina	894	38	5.0	.....	45	4-25	22	0.59	-0.10	0.32	8	9.0	2	8	20	3	nw.	City Light & Power Co.
Colgate	Steele	1,180	12	.....	.....	.....	.....	.....	0.63	+0.10	0.30	23	8.0	3	13	16	2	n.	O. M. Jensen.
Cooperstown	Griggs	1,428	49	3.9	-9.1	47	4-32	11	1.21	+0.63	0.65	8	18.0	3	9	2	20	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	15	.....	.....	.....	.....	.....	1.10	+0.43	0.78	8	13.3	4	11	14	6	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	70	3.2	-6.3	40	4-28	22	1.12	+0.58	0.68	7-8	15.3	12	4	10	17	n.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	45	7.7	-7.3	50	4-28	11	0.61	+0.12	0.27	23	8.9	6	3	12	16	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	22	1.2	-9.3	37	4-35	22	0.79	+0.25	0.55	9	9.7	5	8	6	17	nw.	Mike Davis.
Ellendale	Dickey	1,457	47	7.8	-8.5	49	5-23	11	0.73	+0.27	0.38	23	8.7	7	6	6	19	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	65	6.8	-4.7	44	6-25	22	0.66	-0.06	0.47	23-24	7.9	9	5	7	19	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	54	8.6	-6.7	46	6-23	11†	0.63	+0.07	0.51	23	7.7	5	8	8	15	n.	Helge Dyeste.
Fullerton	Dickey	1,439	48	8.6	-6.6	47	6-24	11	0.80	+0.03	0.46	23	8.0	8	6	10	15	nw.	F. O. Alin.
Gackle	Logan	1,951	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Walter Kranzler.
Grafton	Walsh	827	54	7.0	-3.7	44	4-22	22	1.49	+0.97	0.50	7-8†	14.9	8	11	8	12	n.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	55	4.6	-6.4	46	4-29	22	1.34	+0.72	0.54	7-8	16.7	15	7	11	13	n.	University of N. Dak.
Grand Forks Aprt. 2½ mi. W	Grand Forks	834	5	4.2	.....	47	4-30	22	1.02	.....	0.36	7-8	18.2	13	6	6	19	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	17	9.8	-7.9	51	6-25	22	0.64	+0.12	0.22	24	9.6	9	4	9	18	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	52	1.9	-5.7	38	4-31	22	1.06	+0.47	0.25	24	17.0	8	9	4	18	nw.	A. E. Prior.
Hillsboro	Traill	901	40	7.5	-0.5	47	4-25	22	1.10	+0.46	0.54	8	12.0	4	7	13	11	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	54	5.4	-8.5	45	4-32	11	0.76	+0.11	0.35	7-8	13.3	4	13	3	15	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	5	5.2	.....	47	4-30	11	0.81	.....	0.40	7-8	8.6	11	6	7	18	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	5	5.6	.....	47	4-33	11	1.09	.....	0.57	7-8	12.1	6	12	7	12	nw.	U. S. Wildlife Refuge.
Langdon, 1½ mile SE	Cavalier	1,615	50	2.6	-6.2	40	4-32	22	0.86	+0.23	0.43	7-8	8.9	10	7	10	14	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	53	5.2	-6.3	46	5-28	22	0.79	+0.23	0.35	7-8	9.1	5	8	5	18	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	42	8.9	-5.9	48	6-26	11	0.56	+0.05	0.30	23	11.0	4	12	2	17	nw.	J. O. Halverson.
Mayville	Traill	975	50	7.0	-6.3	46	4-24	11†	1.14	+0.62	0.75	7-8	15.9	10	9	10	12	n.	H. A. Ragatz.
McHenry, 3 miles NE	Eddy	1,509	23	3.4	-7.4	42	4-33	11	0.80	+0.31	0.46	7-8	10.8	6	10	8	13	n.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	34	8.5	-6.6	48	6-25	11	0.52	+0.06	0.38	22-23	7.7	4	8	10	13	n.	J. G. Carlson.
McVile	Nelson	1,467	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. M. Casad.
Milnor	Sargent	1,117	13	6.7	.....	42	6-27	22	0.53	-0.01	0.25	23	9.1	3	8	13	10	n.	E. W. Wilson.
Oakes	Dickey	1,318	17	7.2	-9.0	48	6-25	11†	0.65	+0.15	0.30	23	12.0	9	5	7	19	nw.	H. M. Blazer.
Park River	Walsh	998	42	2.2	-8.9	35	5-28	11	0.60	+0.09	0.19	7-8	7.5	7	12	5	14	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	72	3.5	-3.5	42	4-28	22	0.31	-0.31	0.13	23-24	4.7	7	5	7	19	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	15	3.6	.....	41	4-25	21†	0.82	+0.34	0.30	23	9.9	6	6	10	15	nw.	T. C. Overland.
Sharon	Steele	1,516	22	4.7	-7.5	48	4-24	22	0.89	+0.41	0.47	7-8	10.6	7	6	11	14	nw.	Nels O. Grefshelm.
Valley City	Barnes	1,229	41	8.6	-5.9	46	4-29	11	1.25	+0.76	0.60	8	17.5	7	5	13	13	nw.	Hettie Blythe.
Wahpeton	Richland	962	54	9.0	-6.8	48	6-26	11†	0.43	-0.07	0.30	23	5.3	5	15	3	13	nw.	State School of Science.
Average for Eastern Division				5.8	-6.8	51	6-25	22	0.83	+0.30	0.78	8	11.1	7	8	9	14	nw.	
Middle Division																			
Ashley, 1 mile SE	McIntosh	2,025	50	7.6	-7.2	48	4-26	11†	0.27	-0.23	0.07	7†	4.2	10	8	5	18	nw.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	1	2.7	.....	46	4†-33	11	0.64	.....	0.17	8	10.0	6	7	9	15	n.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	43	5.4	-4.3	48	4-27	17†	1.05	+0.62	0.80	8	13.9	3	11	5	15	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	71	9.1	-6.6	52	5-27	18	0.41	-0.07	0.15	23	7.2	8	5	4	22	nw.	U. S. Weather Bureau.
Bismarck Airt. 2½ mi. SE	Burleigh	1,650	6	3.6	-4.2	51	5-24	18	0.39	-0.18	0.18	23	6.5	11	5	4	22	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	54	4.0	-4.3	41	4†-30	22	0.31	-0.16	0.15	23	3.9	4	10	7	14	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,890	21	6.3	-8.5	42	5-28	22	1.09	+0.60	0.76	7-8	11.4	4	11	5	15	sw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	34	9.6	-7.0	45	4-27	17	0.29	-0.19	0.11	8	4.0	7	5	9	17	se.	J. W. Evans.
Center	Oliver	2,100	8	7.8	.....	50	5-29	18	0.32	.....	0.14	7-8	7.0	5	8	6	17	nw.	Fred L. Heinz.
Drake	McHenry	1,634	16	3.6	-11.8	42	4-28	17†	0.73	+0.32	0.60	7-8	11.0	4	7	11	13	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	50	4.2	-6.1	46	4-21	11	0.27	-0.16	0.09	23	3.8	4	8	8	15	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	40	2.3	-8.0	45	4-34	22	0.66	+0.19	0.23	23	8.2	5	10	6	15	nw.	E. R. Sherman.
Fessenden	Wells	1,610	34	3.0	-8.8	35	5-29	11†	0.98	+0.42	0.43	7-8	12.2	5	7	8	16	n.	John V. Zuber.
Fort Yates	Sioux	1,670	46	11.4	-7.8	53	4-25	18	0.32	-0.06	0.18	23	4.0	2	15	6	10	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,657	25	5.2	-9.0	43	4-30	22	0.35	-0.16	0.20	7	7.3	6	6	5	20	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	69	5.6	-8.8	47	5-23	18	1.17	+0.69	0.69	7-8	12.0	9	7	4	20	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	39	4.4	-8.6	48	4-31	11	0.56	+0.10	0.30	7	9.0	5	16	3	12	nw.	Fred Roble.
Hansboro	Towner	1,597	38	2.2	-7.0	45	5-27	22	0.91	+0.37	0.41	8	18.2	5	10	8	13	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	43	.....	.....	.....	.....	.....	0.23	-0.30	0.15	8	2.8	3	13	6	12	sw.	H. J. Reynolds.
Leeds	Benson	1,515	5	2.0	.....	39	5-32	11	0.72	.....	0.14	11	10.7	9	8	16	7	w.	John Dulmage.
Linton	Emmons	1,711	29	9.8	-5.5	52	4-28	18	0.53	+0.14	0.38	23	6.9	5	8	3	20	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	31	3.0	-8.4	39	5-29	11	1.04	+0.61	0.52	7-8	14.8	7	5	11	15	nw.	Benson Cy. A. & T. Sch.
Mandan, 1½ miles SW	Morton	1,750	32	8.6	-6.6	53	5-22	18	0.61	+0.16	0.44	23	8.6	5	8	3	20	sw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	17	3.5	-10.9	43	5-25	17†	0.49	+0.09	0.30	7-8							

Climatological Data for December 1945-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	53	7.8	-8.1	50	4†	-30	18	0.34	-0.06	0.14	7-8	6.7	6	15	13	3	nw.	H. W. Case.
Epping	Williams	2,224	37	6.4	-8.8	44	4	-29	17	0.24	-0.21	0.10	7	3.7	4	12	7	12	sw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	17							0.37	-0.09	0.19	16-17	1.8	3	9	3	19	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	28	13.0		54	6	-23	17	0.21	-0.27	0.09	8	2.7	6	8	7	16	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	5	12.9	-5.5	54	5	-30	17	0.11	-0.36	0.04	19-20	1.4	8	5	12	14	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	37	8.0	-4.3	43	4	-27	16†	0.82	+0.17	0.52	8	8.6	3	16	12	3	se.	L. D. Nielson.
Halliday	Dunn	2,073	4							0.70		0.38	8	11.8	6	7	10	14	nw.	John Kisse.
Hettinger	Adams	2,675	39	15.4	-2.9	56	5	-23	17†	0.10	-0.27	0.06	23	1.6	2	6	12	13	nw.	Edgar Martin.
Kenmare	Ward	1,799	14	4.7	-9.5	45	4	-26	10	0.74	+0.31	0.43	7-8	9.5	7	12	4	15	w.	Theo. E. Eckberg.
Marmarth	Slope	2,714	37	14.2	-4.3	55	5	-33	17	0.61	+0.21	0.30	8	6.2	5	6	11	14	nw.	S. P. Grane.
Medora	Billings	2,271	31	13.6		56	5	-31	16	0.14	-0.34	0.05	8	2.1	6	13	2	16	w.	Harry Roberts.
Mott	Hettinger	2,424	39	13.2	-2.6	54	5	-25	17	0.10	-0.38	0.10	22-23	1.5	1	8	8	15	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	54	14.7	-2.7	56	5	-23	17	0.75	+0.35	0.35	8	6.8	7	8	10	13	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		4	13.4		52	5	-25	17	0.17		0.06	22	1.5	8	11	3	17	nw.	Peter F. Ficek.
Parshall	Mountrail	1,929	31	5.4	-9.1	45	4	-29	18	0.30	-0.11	0.24	7-8	5.1	5	6	15	10	sw.	C. E. Shubert.
Portal	Burke	1,954	32	2.4	-10.2	44	4†	-32	22	0.49	+0.04	0.30	7	5.8	3	7	7	17	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	41	3.4	-12.4	43	4†	-27	17	0.77	+0.23	0.45	8	10.0	3	6	6	19	nw.	E. J. Lewis.
Richardton, 1½ miles N	Stark	2,467	30	11.8	-4.4	53	5	-21	17	0.15	-0.27	0.08	13-14	2.0	3	7	10	14	se.	Assumption Abbey.
Ryder	Ward	2,108	17							0.51	+0.05	0.23	7-8	6.0	4	9	16	6	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	20	5.2	-8.3	44	5	-25	18	0.70	+0.25	0.24	7-8	9.5	5	1	12	18		H. J. Ruge.
Stanley	Mountrail	2,258	8	2.2		40	4	-28	22	0.65		0.38	7	9.9	3	3	16	12	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	17							0.54	+0.12	0.35	7-8	9.3	7	12	8	11	w.	Geo. N. Pilgard.
Tioga	Williams	2,279	17							0.84	+0.40	0.80	7-8	12.9	3	5	8	18	se.	L. A. Simon.
Trotters	Golden Valley		20							0.34	-0.06	0.10	7	3.2	7	1	14	16	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	5	6.2		44	4	-25	18	0.69		0.35	7-8	11.2	6	9	6	16	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	33	9.7	-5.6	48	5	-28	17	0.73	+0.20	0.54	7-8	5.9	6	4	16	11	w.	J. C. Zeller.
Wildrose	Williams	2,258	16							0.85	+0.33			10.0		16	3	12	sw.	Jonathan Winkjer.
Williston	Williams	1,878	67	9.0	-4.8	45	5	-24	16	0.66	+0.08	0.50	7-8	6.1	9	4	5	22	sw.	U. S. Weather Bureau.
Average for Western Division				9.4	-6.5	56	5	-33	17	0.46	+0.02	0.80	7-8	5.8	6	8	8	15	nw.	
Average for the State				7.0	-6.4	56	5	-38	11	0.64	+0.17	0.80	7-8	8.8	6	8	8	15	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for December 1945

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum..	28	21	20	48	45	46	46	33	2	-3	8	12	17	16	-1	1	-1	4	11	6	-2	-5	15	17	16	15	28	27	23	21	10	16.9	
	Minimum..	20	5	5	15	25	24	24	-3	-7	-25	-26	-12	8	-12	-14	-16	-22	-26	-14	-2	-19	-16	6	13	6	-7	9	17	11	5	-14	-1.7	
Bismarck Airport	Maximum..	32	20	29	48	51	43	37	30	10	0	10	11	18	10	0	2	0	3	18	11	1	-1	11	17	14	10	24	23	24	26	14	17.6	
	Minimum..	17	13	10	22	25	24	20	0	-4	-20	-21	-10	10	-10	-14	-18	-22	-24	-1	5	-19	-17	-1	9	6	-9	4	15	13	0	-9	-0.5	
Bottineau	Maximum..	34	22	16	41	41	34	29	24	18	0	1	9	17	14	1	1	-9	-6	9	9	1	-11	2	18	18	14	12	15	15	9	9	12.9	
	Minimum..	13	14	6	7	21	14	9	15	-11	-19	-24	-12	7	-12	-16	-20	-24	-27	-14	-20	-19	-30	-12	0	10	3	0	7	9	2	-15	-4.9	
Carson	Maximum..	35	21	26	45	43	41	37	34	10	10	5	14	20	14	0	2	-2	4	16	15	3	-5	6	11	11	16	37	24	32	30	18.7		
	Minimum..	15	11	12	21	33	23	27	3	-1	-5	-11	-8	9	-11	-16	-24	-27	-20	-13	-4	-12	-16	-8	4	7	-7	8	10	15	10	-1	0.5	
Crosby	Maximum..	17	24	38	41	42	34	28	6	7	-4	5	18	17	8	-7	-6	-7	5	13	5	-10	0	8	13	8	10	16	19	18	27	23	12.9	
	Minimum..	11	8	4	5	28	22	22	0	-1	-8	-22	-16	1	-18	-18	-26	-28	-27	-22	-7	-22	-25	-10	0	-2	-12	-10	1	8	9	-3	-5.1	
Devils Lake	Maximum..	29	22	17	40	38	33	29	18	-4	-7	-3	8	15	8	-4	-9	-9	-4	9	-2	-6	-8	16	20	16	12	13	16	14	7	-2	10.4	
	Minimum..	20	14	8	17	21	20	18	-5	-12	-22	-26	-10	-4	-8	-14	-20	-24	-22	-8	-16	-26	-28	-10	16	10	-2	3	13	-4	-6	-19	-4.0	
Dickinson Airport	Maximum..	34	38	40	52	54	45	43	26	10	10	14	19	20	6	1	0	2	4	19	14	2	-2	7	16	15	20	36	34	33	29	21.7		
	Minimum..	12	9	14	31	33	23	29	3	5	-2	-3	1	6	-13	-18	-20	-24	-16	-5	1	-12	-12	-2	1	4	-7	9	6	17	17	12	3.1	
Dunn Center	Maximum..	37	29	38	51	52	44	39	35	10	8	11	21	21	17	0	4	1	4	18	15	4	-2	8	15	12	34	33	33	33	23	21.1		
	Minimum..	15	11	13	26	27	27	25	2	1	-8	-12	-6	12	-14	-15	-23	-24	-22	-2	-3	-13	-15	-5	-2	5	-13	0	17	14	13	10	1.3	
Fargo Airport	Maximum..	32	28	25	38	40	44	36	32	0	-3	2	20	17	17	2	-1	1	5	12	2	-5	-9	19	23	20	17	20	21	23	7	1	15.7	
	Minimum..	28	11	11	17	23	22	21	-2	-9	-17	-21	-1	3	-8	-11	-15	-18	-20	-11	-14	-22	-25	-13	10	10	-8	-5	15	5	-2	-15	-2.0	
Fessenden	Maximum..	28	23	19	29	35	33	30	27	4	-10	-4	8	19	15	-4	-6	-11	-5	14	10	-7	-9	11	18	15	17	19	16	11	-6	6	11.5	
	Minimum..	13	16	10	12	24	25	24	-4	-12	-20	-29	-29	-2	-13	-15	-20	-23	-28	-14	-17	-24	-28	-19	9	-2	-5	6	9	5	-5	-19	-5.4	
Fullerton	Maximum..	34	26	21	44	46	47	40	26	3	-2	5	14	18	16	3	2	1	9	15	13	2	-7	16	21	18	13	20	24	24	18	11	17.6	
	Minimum..	26	19	7	18	20	28	17	8	-8	-15	-24	0	7	-11	-12	-12	-21	-20	-10	-10	-13	-21	-15	16	-1	8	-4	10	17	-5	-11	-0.4	
Garrison	Maximum..	28	18	25	44	47	38	34	17	10	-3	2	9	18	5	-5	-4	-4	-2	14	8	-3	-6	8	15	12	9	19	21	21	-4	-11	17.6	
	Minimum..	16	10	7	24	25	25	17	-4	-7	-20	-20	-12	-4	-13	-15	-18	-21	-23	-9	-8	-21	-21	-7	8	0	-9	-1	7	10	9	-14	-2.6	
Golva	Maximum..	36	43	41	53	54	47	44	26	12	16	20	19	20	7	3	4	1	3	26	18	16	0	11	20	14	25	37	39	39	35	35	24.6	
	Minimum..	6	5	10	30	30	22	26	-1	-10	-9	-8	6	5	-16	-25	-25	-30	-22	-11	10	-9	-16	-9	-10	6	1	11	11	24	17	18	1.2	
Grafton	Maximum..	36	28	22	44	35	38	34	31	5	1	1	6	18	15	3	3	0	4	11	10	1	-6	15	20	21	16	15	17	17	15	3	15.4	
	Minimum..	27	14	10	11	21	27	14	5	-7	-9	-21	8	-3	-4	-10	-10	-18	-19	-14	-12	-15	-22	-12	15	14								
Grand Forks Airport	Maximum..	31	28	21	47	38	42	30	27	-1	-3	0	10	16	10	1	-3	-1	1	12	-2	-6	-8	18	23	17	17	14	19	18	4	-2	13.3	
	Minimum..	25	12	8	17	22	22	15	-3	-9	-21	-25	-10	6	-9	-12	-19	-22	-23	-17	-18	-25	-30	-12	8	7	-7	-9	9	10	-2	8	-16	-5.5
Jamestown Airport	Maximum..	29	23	19	47	42	42	40	26	0	-4	0	11	17	12	0	0	0	5	12	5	-4	-6	17	20	16	15	20	19	21	10	6	14.4	
	Minimum..	22	10	6	16	22	21	21	-3	-13	-25	-30	-13	1	-13	-12	-19	-22	-22	-11	-14	-26	-27	8	10	7	-6	-1	12	3	-3	-19	-4.4	
Kenmare	Maximum..	19	27	40	45	42	37	28	10	9	-3	5	20	20	-5	3	-4	-1	8	9	-1	-10	0	8	16	12	12	15	18	13	25	18	13.3	
	Minimum..	15	9	-2	7	25	18	14	5	-5	-26	-21	-12	-2	-17	-18	-15	-18	-17	-11	-12	-18	-25	-17	-1	2	-8	0	6	10	7	-12	-4.4	
Langdon	Maximum..	28	23	17	40	35	35	28	21	-2	-5	-2	10	15	13	-1	-4	-3	-5	8	2	-6	-8	12	18	18	12	15	13	12	7	-2	11.1	
	Minimum..	20	16	9	11	18	18	12	-2	-13	-18	-25	-12	8	-9	-17	-22	-25	-26	-20	-22	-27	-32	-14	10	9	3	-6	8	1	-5	-20	-6.6	
Marmarth	Maximum..	35	42	41	45	55	48	47	32	18	15	23	23	23	17	3	-10	-5	5	28	27	26	-1	12	20	15	22	40	39	36	36	26.2		
	Minimum..	7	10	7	20	29	20	28	2	4	-9	-6	5	7	8	-27	-29	-33	-24	-16	15	-5	-5	-3	-5	0	7	5	31	32	22	22	2.2	
Minot Airport	Maximum..	27	19	29	42	42	36	35	10	7	-10	1	17	18	8	-3	-5	-4	1	12	1	-7	-7	7	14	12	11	12	17	17	18	14	12.2	
	Minimum..	10	12	5	28	28	28	10	-5	-9	-20	-23	-14	4	-16	-13	-14	-18	-16	1	-11	-24	-26	-8	7	-1	-8	0	11	6	-5	-14	-3.3	
Mott	Maximum..	35	34	38	50	54	52	46	34	20	16	14	22	24	20	12	8	5	6	22	24	20	-2	10	16	16	18	38	34	35	33	34	25.1	
	Minimum..	14	10	13	24	27	22	18	10	5	-2	-8	-5	12	9	-14	-23	-25	-21	-10	0	-11	-12	-8	8	-4	-6	-13	-4	3	18	15	10	1.4
Pembina Airport	Maximum..	31	22	18	42	31	35	30	17	-1	-3	1	9	12	6	3	-2	0	5	9	-5	-9	-5	18	21	16	14	15	14	14	2	-6	11.1	
	Minimum..	21	7	8	16	24	19	17	-1	-10	-16	-22	-6	-4	-12	-10	-16	-18	-22	-12	-16	-22	-28	7	16	12	-14	-6	5	-6	-14	-22	-4.4	
Sharon	Maximum..	31	23	22	48	39	39	34	25	0	0	-2	10	16	14	-2	-5	-8	-6	10	6	-7	-10	15	19	18	12	16	19	14	9	5	13.3	
	Minimum..	23	12	8	15	21	25	17	0	-11	-14	-23	-10	-5	-12	-14	-19	-22	-23	-16	-16	-20	-24	-14	14	12	-2	-5	9	2	-2	-19	-3.3	
Steele	Maximum..	28	21	20	46	40	42	37	35	7	5	5	13	16	15	2	-3	-2	3	14	13	-1	-7	10	19	16	11	24	23	21	17	17	16.1	
	Minimum..	19	15	7	8	27	21	21	6	-7	-17	-25	-10	5	-12	-14	-18	-24	-24	-15	-10	-16	-22	-11	10	11	-4	-3	16	14	7	-21	-2.2	
Valley City	Maximum..	36	28	24	46	44	45	43	34	8	-2	2	9	20	16	0	0	0	7	14	12	-3	-5	15	22	21	13	20	20	22	17	10	17.7	
	Minimum..	26	18	9	16	22	29	19	7	-9	-13	-29	-8	1	-9	-12	-12	-20	-19	-9	-11	-8	-20	13	15	5	8	9	12	16	0	-6	-0.0	
Wahpeton	Maximum..	35	31	36	29	36	48	41	34	10	3	3	23	20	12	3	3	10	11	12	-1	-1	-3	17	23	17	24	27	26	25	9	18	18.0	
	Minimum..	29	20	13	6	18	26	20	7	-7	-12	-26	-4	-2	-4	-12	-14	-22	-20	-8	-12	-11	-26	-16	11	7	10	10	-3	-8	-0	-0.6		
Williston	Maximum..	28	28	36	42	45	40	34	16	12	7	4	18	18	2	4	-7	-9	7	17	7	-1	-1	8	11									

Daily Precipitation for December 1945

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James								.50	.05					.01		.02					T.			.03	.50	T.	.03					1.14	
Cassetton	Red.								.03	T.					.02								.03		.34	.02	T.				.07	T.	0.61	
Cooperstown	Sheyenne								T.	.65														.36	T.	T.	T.					.20	1.21	
Courteay	James								.78					T.									.07	.15	T.	T.	T.					.10	1.10	
Devils Lake ^{1 5}	Devils Lake	T.	T.	T.	T.				.34	.34	T.	T.	T.	.01	T.							T.	.03	.01	.20	.02	.02	T.	.02	.06	.02	.05		1.12
Edgeley	James								T.	.12				.02									.08	.29						.04	.08		0.61	
Edmore	Devils Lake								T.													.07	.03							.05	.09		0.79	
Ellendale	James								.04					.02	.01							.16	.38							.03	.09		0.73	
Fargo ^{1 5}	Red.	T.	T.	T.					.04	T.	T.		T.	T.	.02	T.					.01	T.	.03	.45	.02	T.	.01	T.	T.	T.	.07	.01		0.66
Forman	Sheyenne								.04					T.	T.								.51	T.					.02	T.	.03	T.	.03	0.63
Fullerton	James								.02	.06				.02							T.	T.	.08	.46						.07	.06	.03	0.80	
Gackle	do																																	
Grafton	Red.								.50				T.	T.	.01	T.						.09	.50	.10	.10	T.		.05	.12	T.	.03		1.49	
Grand Forks Airport ³	do	T.							.12	.30	.05		T.	T.	.01	.02					.02	T.	.02	.32	.03	T.	.01	.05	.01	.03	.05	T.	1.02	
Hankinson ²	do		.03	.09						.06					.01	.02							.04	.12	.22							.05	0.64	
Hannah	Pembina								.18	.07					.16		.09								.12	.25	.07				.12		1.06	
Hillsboro	Red.	T.							T.	.54											T.	T.			.48	.06	T.		.02	T.	T.		1.10	
Jamestown Airport ³	James	T.	T.	T.					.09	.31		T.	T.	.01	.01						T.	.02	.02	.19	.03	T.	.01	.03	T.	.09	T.		0.81	
Langdon	Pembina								.43					T.	.03								.05	.43	.10	.05	.04		.04	.02	.05	.05	0.86	
Larimore	Red.								.35														.02	.29	.07						.06		0.79	
Lisbon	Sheyenne								T.	.10		T.										.06	.30	T.						T.	T.	.10	0.56	
Mayville	Red.	T.							.75	.03				T.	T.	T.	.02				T.	T.	.02	.23	.03	.02	.01	T.	T.	.01	.02	T.	1.14	
McHenry	James								.01	.45				T.	T.	T.						.05	.15	.08	T.	T.		T.		.06	T.		0.80	
McLeod	Sheyenne		T.							.05				.01									.38							.08			0.52	
Oakes ²	James								.03	.06	T.				.01							.05	.30	.07		.02				.05	.06		0.65	
Park River	Red.								.19				T.	T.	T.	T.	T.				T.	.05	.14	.04				.04	.10	.04		0.60		
Pembina Airport ³	do	T.			T.	T.			T.	T.	T.	T.	T.	T.	T.	T.	T.				T.	.01	.01	.09	.06	T.	T.	.06	.01				0.31	
Petersburg	do								.14	.21													.01	.30	.05	T.				.09	.03		0.82	
Sharon	do								.01	.47	.05													.22	.07				.01	T.	.07		0.89	
Valley City	Sheyenne	T.	T.						.60					.01	.01	T.						.05		.45			.03	T.		T.		.10	1.25	
Wahpeton	Red.	T.	.02						.05					T.	.03							T.	.03	.30	T.								0.43	
Middle Division																																		
Ashley ³	Missouri								.07	.03					.01	T.					T.	T.	.02	.01	.07	T.	.01	.01		T.	.02	.02	T.	0.27
Bisbee	Devils Lake								.80															.05									1.05	
Bismarck Airport ^{1 5}	Missouri	T.	T.						.01	.07	T.		T.	.02	T.						T.	.20	.02	T.	.02	.18	.02	.01	T.	.02	.01	T.	0.39	
Bottineau ²	Mouse								.07															.15								.05	0.31	
Butte	do								.28	.48														.23	.33	T.	T.			T.	.04	.10	T.	1.09
Carson	Heart								.11																								0.29	
Center	Missouri								.01	.13				T.	.07								.06							T.	T.	T.	0.32	
Drake ²	Mouse								.60														.05		.02							.06	0.73	
Dunseith	do	T.							.07																					.04	T.	.07	0.27	
Eckman	do								.12															.10	.23	T.				T.	.15	.06	0.66	
Fessenden	James								.43	.09														.09					.18	.20	T.		0.98	
Fort Yates	Missouri														T.									.18								0.32		
Foxholm	Mouse								.20	.07													.14		.18		T.						0.35	
Garrison ³	Missouri								.42	.27					.02	T.							.05	.04		.22	T.	.01	T.		.08	.06	T.	1.17
Granville	Mouse								.08	.30						T.	T.								.08	T.		T.	.04	T.	.06	T.	0.56	
Hansboro	Devils Lake								.41																.25		.13		T.	.04	.08	.04		0.91
Linton	Missouri								.03					.01	.01									.10	T.	.38			T.	T.	T.		0.53	
Maddock	Sheyenne								.11	.41													.06		.28	.04	T.	T.	T.	.09	.05		1.04	
Mandan ²	Missouri								.08															.04	T.	T.	T.	T.	T.	.04	T.	.01	0.61	
Max ²	do								.30														.11		.01	.02				.03		.02	0.49	
McClusky	do								.61																.36	T.				.03		.08	1.10	
Minot Airport ³	Mouse	T.	T.						.39	.30				.01	.01								.01	.06	.01	.01	.06	.01	T.	.02	.01	.04	.01	0.96
Mohall	do								.14	.07															.01	.03	.02	.04	T.		.07	.01	.13	0.52
Napoleon	Missouri								.12						.02											.02	.05				T.	.03	T.	0.24
New Salem	Heart								.07															.12		.20	T.			T.	.03	T.	0.42	
Pettibone	James								.38						T.	T.								.06		.37	T.		.01	T.	.04	.0		

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

UNIVERSITY OF ILLINOIS

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LIV BBSMARCK, N. D., ANNUAL 1945 No. 13

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GENERAL SUMMARY

The year 1945 was another good crop year. Precipitation averaged below normal in all sections but showers came when needed and there was considerable subsoil moisture due to five wet years from 1940 to 1944 and particularly the wet month of November 1944. The precipitation was below normal in all months except March, September, and December. Snowfall for the year averaged about normal but November and December had above normal snowfall. Temperatures during January, February, and March averaged considerably above normal; August and October slightly above normal; but all other months averaged below normal. The cool weather from May through July also helped to produce the large 1945 crop, but cold weather and heavy snowfall in November and December made the 1945-1946 winter seem long and considerable feeding of livestock was necessary in the northern and eastern parts of the state.

The average temperature for the state was 39.0°, or 0.6° below the 1892-1945 average, and 2.0° lower than the 1944 average. The highest annual temperature reported was 42.6° at Medora; the lowest was 34.7° at Edmore. The absolute range in temperature was 143° from 105° at Van Hook on September 4 to -38° at Willow City on December 11.

The average precipitation for the state was 14.85 inches, or 2.23 inches below the 1892-1945 average, and 6.60 inches less than the average for 1944. The greatest annual precipitation reported was 24.04 inches at Milnor; the least, 10.57 inches at New Hradec. The greatest monthly amount was at Pembina in September. The average snowfall was 31.8 inches. The average number of days with 0.01 inch or more of precipitation was 77.

There were 131 clear days, 118 partly cloudy days, and 116 cloudy days.

The prevailing wind was northwest.

CLIMATOLOGICAL SUMMARY, 1945

Month	Temperature in degrees Fahrenheit				Precipitation, in inches			Number of days				Prevailing direction of the wind
	Mean	Departure	Highest	Lowest	Average	Departure	Snowfall	Precip., .01 inch or more	Clear	Pt. cloudy	Cloudy	
January	12.7	+5.9	51	-31	0.41	-0.06	5.6	5	8	8	15	nw.
February	15.1	+5.2	52	-29	0.36	-0.10	4.6	4	12	8	8	nw.
March	33.3	+9.5	77	-27	1.34	+0.54	2.4	6	13	9	9	nw.
April	38.0	+3.5	80	6	1.10	-0.33	4.5	6	7	12	11	nw.
May	47.7	-5.8	84	10	1.54	-0.77	0.5	8	10	11	10	nw.
June	57.5	-5.3	89	28	2.48	-1.02	0	11	8	12	10	nw.
July	67.8	-1.2	102	30	2.31	-0.12	0	9	16	12	3	nw.
August	67.1	+0.6	105	32	1.68	-0.40	0	6	16	11	4	nw.
September	54.5	-2.3	106	14	2.14	+0.59	0.1	9	11	9	10	nw.
October	45.1	+0.9	89	6	0.37	-0.61	T.	3	15	9	7	nw.
November	22.3	-4.4	75	-26	0.48	-0.12	5.3	4	7	9	14	nw.
December	7.0	-6.4	56	-38	0.64	+0.17	8.8	6	8	8	15	nw.
Annual ...	39.0	-0.6	106	-38	14.85	-2.23	31.8	77	131	118	116	nw.

ANNUAL COMPARATIVE DATA FOR THE STATE

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.8	108	-52	20.24	21.00	13.79	18.34	34.9	70	157	95	114
1893...	35.8	112	-54	18.02	16.33	13.19	15.85	46.1	65	154	104	107
1894...	40.3	107	-47	17.45	14.55	14.84	15.61	24.6	56	174	100	91
1895...	37.7	104	-50	18.41	16.97	16.69	17.36	20.9	63	155	117	93
1896...	37.3	107	-42	26.30	21.67	19.97	22.65	48.3	80	143	111	112
1897...	37.8	109	-48	18.75	16.04	13.26	16.02	33.9	63	162	105	98
1898...	39.2	106	-38	18.97	15.55	13.92	16.15	22.7	57	159	108	98
1899...	36.9	109	-48	17.40	19.48	15.98	17.62	26.6	60	161	105	99
1900...	40.9	114	-48	21.61	18.70	16.88	19.06	23.2	62	178	97	90
1901...	40.4	110	-43	24.35	17.54	16.33	19.41	20.2	63	175	92	98
1902...	39.4	106	-39	21.66	18.50	17.89	19.35	29.9	62	160	79	126
1903...	38.3	108	-49	20.18	18.27	19.28	19.24	28.8	65	166	81	118
1904...	37.6	103	-52	21.59	18.26	13.59	17.81	38.1	68	150	73	143
1905...	39.3	107	-46	23.23	19.17	14.34	18.91	29.6	66	152	79	134
1906...	39.4	109	-40	21.14	17.68	21.28	20.03	35.4	78	164	93	108
1907...	36.9	104	-49	17.17	13.06	12.69	14.31	33.7	63	175	101	89
1908...	40.7	104	-41	18.84	17.77	19.05	18.55	43.7	75	164	97	105
1909...	38.2	109	-48	21.79	15.89	16.61	18.10	33.5	71	143	110	112
1910...	41.1	114	-50	11.88	12.17	13.56	12.54	21.0	52	180	92	93
1911...	38.0	108	-43	21.73	18.60	14.94	18.42	36.5	76	160	100	105
1912...	38.2	118	-52	22.72	19.73	18.71	20.39	19.3	74	161	102	103
1913...	40.0	106	-54	17.85	13.39	12.70	14.65	19.4	64	166	104	95
1914...	40.1	109	-47	19.81	19.57	17.53	18.97	30.0	70	155	110	100
1915...	39.7	104	-48	21.06	19.06	17.72	19.28	21.2	72	148	101	116
1916...	36.2	105	-56	24.11	18.88	16.63	19.87	54.2	70	170	97	99
1917...	36.3	114	-48	12.61	10.44	9.20	10.75	40.5	60	154	111	100
1918...	40.0	102	-44	18.01	16.00	14.01	16.01	29.7	63	159	104	102
1919...	38.6	108	-44	20.55	14.71	11.51	15.59	47.2	60	165	107	93
1920...	39.5	108	-44	17.67	14.26	13.92	15.28	27.9	64	166	108	92
1921...	42.0	110	-33	23.05	18.96	16.30	19.44	29.4	74	158	111	96
1922...	39.7	115	-46	21.97	19.09	18.62	19.89	42.8	75	155	100	110
1923...	40.7	103	-40	19.12	16.65	17.60	17.79	30.1	64	160	110	95
1924...	38.2	105	-46	20.23	16.89	14.74	17.12	26.1	66	158	101	107
1925...	40.6	111	-39	21.91	14.74	13.29	16.65	19.7	64	158	107	100
1926...	40.7	108	-36	18.05	14.40	13.65	15.37	23.7	68	151	105	109
1927...	38.0	101	-44	22.72	21.25	20.56	21.51	36.2	79	150	102	113
1928...	41.1	107	-41	20.03	18.12	15.48	17.88	17.3	59	177	101	88
1929...	38.0	109	-44	15.09	13.27	14.57	14.31	41.8	65	171	98	96
1930...	41.4	107	-43	17.13	14.19	13.36	14.89	25.0	66	166	101	98
1931...	44.9	111	-31	18.48	14.10	12.41	15.00	18.0	56	180	92	93
1932...	40.0	108	-34	18.48	16.39	16.71	17.18	34.9	69	156	108	102
1933...	41.1	110	-45	14.01	12.74	13.59	13.45	42.2	65	161	104	100
1934...	43.4	112	-44	13.33	8.61	6.60	9.51	15.2	54	160	109	96
1935...	39.4	110	-44	21.24	17.97	14.91	18.04	33.3	77	137	113	115
1936...	38.8	121	-60	10.09	8.21	8.18	8.83	35.2	59	171	110	85
1937...	39.1	111	-44	20.10	17.37	13.63	17.03	36.0	69	150	111	104
1938...	41.9	109	-41	15.27	14.60	16.13	15.33	30.6	73	149	116	100
1939...	41.9	108	-46	15.56	13.88	13.01	14.15	25.5	71	161	109	95
1940...	41.0	107	-39	19.23	16.79	16.14	17.39	33.6	80	142	110	114
1941...	42.2	111	-40	25.07	22.42	22.19	23.23	25.1	92	128	115	122
1942...	40.9	105	-35	22.40	17.62	16.22	18.75	35.3	84	128	114	123
1943...	39.8	104	-44	18.89	18.58	17.68	18.38	41.0	76	157	109	99
1944...	41.0	103	-43	24.55	20.75	19.05	21.45	29.3	79	151	109	106
1945...	39.0	105	-38	16.46	14.56	13.53	14.85	31.8	77	131	118	116
Period	39.6	121	-60	19.37	16.55	15.33	17.08	31.1	68	158	103	104

THE WEATHER BY MONTHS

JANUARY.—Temperatures were mostly below zero at the beginning of the month and again at the close, with several weeks of warmer weather between. Although precipitation averaged slightly below normal, there were more than the usual number of wet days and the greatest number of cloudy and foggy days ever recorded in January. There were less than the usual number of blizzards. Heavy frost on wires, followed by light rain and sleet, caused considerable communication trouble to telephone and telegraph lines on the 19th.

FEBRUARY.—February was warm and dry. The coldest period occurred between the 15th and 19th. Precipitation in the eastern part of the state was above normal, but in the central and western portions the moisture averaged only slightly more than 50% of the normal. Snow on the ground at the close of the month was mostly light, but with the greatest amounts in the eastern part of the state where much feeding of livestock was

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THE WEATHER BY MONTHS—Continued

necessary, since much of the snow cover began early in November. No severe storms were reported.

MARCH.—This was the third warmest March on record. The precipitation was above normal. The western section averaged more moisture than the eastern section. It was the wettest March since 1916 in the western part of the state. The weather was excellent for outdoor work. Plowing and seeding were getting a good start at most places during the third week, but the precipitation and colder weather later in the month brought this work to a standstill. Floods occurred along the Knife, Heart, Cannonball, and Red rivers.

APRIL.—April was cold and windy. The precipitation averaged below normal but as most of it fell as snow, the snowfall was above normal. Farm work was slightly later than average in getting started due to wet and frozen ground, but spring wheat seeding was well along in the southwestern part of the state by the close of the month. Pastures afforded little or no feed.

MAY.—Temperatures were uniformly cool throughout the month, but most stations in the southern part of the state had no frost after the 15th. The precipitation was below normal in all sections. In a few sections there was not enough moisture to germinate the seeds early in the month, but with the showers later in the month and the available subsoil moisture, crops were getting a good start but were late. By the close of the month much farm work was completed, but crops and pastures were late. Livestock were in fair to good condition.

JUNE.—The month was cool and dry. June 1915, was the only cooler June of record. Sixteen stations in the state reported below freezing readings on the 2d, 3d, or 4th of the month. Precipitation was below normal at all but 17 stations. Due to cool weather, crops were late but had a good stand. Pastures were good and livestock gained flesh. Considerable scattered hail damage occurred, especially in Williams and Morton counties.

JULY.—Temperatures during the first half of July were below normal while during the last half they averaged above normal. The precipitation was below normal in the eastern and western divisions and slightly above normal in the middle division. The precipitation was well distributed throughout the month and only a few stations had washing and flooding showers. Destructive hailstorms occurred on July 3d, mostly in Morton, Grant, Williams, Ward, and western McLean counties, and on July 21-22 in Emmons and Logan counties. July was a very good month for crops.

AUGUST.—Temperatures during August averaged near normal at all stations. The precipitation was below normal in the eastern and western divisions and slightly above normal in the middle division. August was a good month for growing crops and for harvesting. About the average number of hailstorms occurred. Corn had a late start but made excellent growth during the month. Pastures were mostly good.

SEPTEMBER.—Unusually warm weather prevailed during the first week, but temperatures were below normal on nearly all days after the 8th. Many stations recorded the highest readings of the year on the 5th. Some stations had the first killing frost on the 15th and all places had killing frost before the close of the month. Precipitation was heavy in all eastern and some central counties and slightly above normal in the western section. Some corn was damaged by the freeze during the last half of the month, but as a rule crops of all kinds were good to excellent.

OCTOBER.—The temperature during October averaged slightly

above normal in all the sections of the state. The precipitation averaged below normal, with the least amount in the eastern division. It was one of the driest Octobers of record, but averaged 0.25 inch more than October 1944 which was the driest of record. Corn picking and potato and beet digging made excellent progress and the dry sunny weather was favorable for maturing late crops. It was too dry for fall plowing in some places.

NOVEMBER.—November was a cold month. Threshing was still under way at the beginning of the month but the precipitation from the 5th to the 8th, followed by sub-zero temperatures, ended most outdoor work. The precipitation was below normal in the eastern part of the state and slightly above normal in the western part with most of it occurring during the first half of the month.

DECEMBER.—This was the coldest month of the year. At many stations minimum temperatures were below zero every night from the 9th to the 24th. The northeastern part of the state was much colder than the southwestern part. A snowstorm, with heavy falls in the northeastern and north-central counties, occurred on the 8th and moderate blizzard conditions prevailed, occurring at most stations at times from the 20th to the end of the month. It was a very foggy month. Considerable livestock feeding was necessary.

KILLING FROSTS

STATIONS	Last in Spring	First in Autumn	STATIONS	Last in Spring	First in Autumn
<i>Eastern Div.</i>					
Carrington.....	May 29	Sept. 15	Linton.....	May 13	Sept. 24
Casselton.....	" 16	" 28	Maddock.....	" 29	" 15
Cavalier.....	" 29	" 15	Mandan.....	" 13	" 24
Cooperstown.....	" 29	" 15	Max.....	" 29	" 15
Devils Lake.....	" 29	" 15	McClusky.....	" 29	" 24
Edgeley.....	" 17	" 15	Minot.....	" 15	" 15
Edmore.....	June 4	" 13	Mohall.....	" 29	" 15
Ellendale.....	May 13	" 24	Napoleon.....	" 16	" 15
Fargo.....	" 17	" 28	New Salem.....	" 16	" 28
Forman.....	" 13	" 28	Pettibone.....	June 3	" 15
Fullerton.....	" 16	" 15	Rolla.....	May 29	" 15
Grafton.....	" 14	" 15	Steele.....	June 4	" 15
Grand Forks.....	" 16	" 21	Towner.....	" 4	" 15
Hankinson.....	" 17	" 28	Turtle Lake.....	May 29	" 15
Hannu.....	" 29	" 15	Underwood.....	" 29	" 15
Hillsboro.....	" 16	" 28	Velva.....	" 29	" 15
Jamestown.....	" 17	" 15	Washburn.....	" 14	" 28
Kensal.....	June 4	" 15	Westhope.....	" 29	" 15
Langdon.....	May 29	" 15	Willow City.....	June 3	" 13
Larimore.....	" 17	" 15	Wilton.....	May 15	" 15
Lisbon.....	" 15	" 28	Wishek.....	May 16	" 13
Mayville.....	" 16	" 28			
McHenry.....	June 3	" 15	<i>Western Div.</i>		
McLeod.....	May 16	" 24	Almont.....	" 9	" 25
Milnor.....	" 16	" 15	Amidon.....	" 15	" 20
Oakes.....	" 16	" 15	Bowbells.....	" 29	" 15
Park River.....	June 3	" 15	Bowman.....	" 15	" 20
Pembina.....	May 29	" 25	Crosby.....	" 29	" 25
Petersburg.....	" 29	" 15	Dickinson.....	" 22	" 21
Sharon.....	" 14	" 15	Dunn Center.....	" 29	" 15
Valley City.....	" 13	" 28	Elbowoods.....	" 29	" 13
Walpeton.....	" 16	" 28	Epping.....	" 29	" 18
			Fryburg.....	" 15	" 20
<i>Middle Div.</i>			Golva.....	" 15	" 13
Ashley.....	" 16	" 24	Grenora.....	" 29	" 25
Bisbee.....	" 29	" 15	Hettinger.....	" 22	" 13
Bismarck.....	" 13	" 27	Kenmare.....	" 15	" 15
Bottineau.....	" 29	" 15	Marmarth.....	" 22	" 20
Butte.....	" 29	" 15	Medora.....	" 22	" 20
Carson.....	" 21	" 20	Mott.....	" 14	" 20
Center.....	" 29	" 13	New England.....	" 14	" 27
Drake.....	" 29	" 24	New Hradec.....	" 14	" 20
Dunseith.....	" 29	" 15	Parshall.....	" 29	" 13
Eckman.....	" 29	" 15	Portal.....	" 29	" 15
Fessenden.....	" 29	" 15	Powers Lake.....	" 29	" 20
Fort Yates.....	" 16	" 24	Richardton.....	" 14	" 20
Foxholm.....	" 29	" 15	Sanish.....	" 29	" 15
Garrison.....	" 29	" 15	Stanley.....	" 29	" 15
Granville.....	" 29	" 15	Van Hook.....	" 29	" 13
Hansboro.....	" 29	" 15	Watford City.....	" 29	" 20
Leeds.....	June 4	" 15	Williston.....	" 15	" 27

MONTHLY AMOUNTS OF EVAPORATION—inches, and WIND MOVEMENT—miles, FOR 1945

Station	Data	Apr.	May	June	July	Aug.	Sept.	Seasonal	Average	Observer
Dickinson.....	Evaporation.....	3.776	4.761	5.222	6.773	7.482	4.767	32.781	39 years	Agri. Experiment Substa.
	Wind movement....	4.310	4.365	3.935	2.980	3.460	3.720	22.770	34.607	
Mandan.....	Evaporation.....	3.492	4.609	4.279	5.647	6.064	3.716	27.807	32 years	No. Gr. Plains Field Sta.
	Wind movement....	5.410	4.737	3.311	2.644	2.752	3.279	22.133	33.455	

Climatological Data for the Year 1945

Stations	County	Elevation, feet	Temperature (degrees Fahrenheit)					Precipitation (inches)					Number of days					Prevailing direction of wind		
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	With 0.1 in or more precip.	Clear		Pt. cloudy	Cloudy
Eastern Division																				
Carrington	Foster	1,579	48	36.9	100	Aug. 18	-26	Jan. 9	48	12.63	2.71	Sept.	0.13	Feb.†	32.0	72	172	93	100	nw.
Casselton	Cass	934	50	40.4	98	Aug. 17†	-23	Dec. 11†	50	16.28	3.29	Sept.	0.20	Nov.	27.1	79	129	142	94	s.
Cavalier	Pembina	894	10	36.7	102	Aug. 18	-26	Jan. 8	38	20.21	5.50	July	0.11	Feb.	31.5	67	113	136	116	nw.
Cooperstown	Griggs	1,428	49	39.2	101	Aug. 18	-32	Dec. 11	49	15.78	3.47	Sept.	0.05	Nov.	40.0	62	113	87	165	nw.
Devils Lake	Ramsey	1,471	41	37.3	98	Aug. 18	-28	Dec. 22	70	19.57	3.83	Sept.	0.35	Feb.	43.8	103	86	116	163	nw.
Edgeley, 2 mi. S	LaMoure	1,568	45	40.1	102	Aug. 17	-28	Dec. 11	45	13.34	2.40	Sept.	0.02	Nov.	21.1	77	121	134	110	nw.
Edmore, 14 mi. W	Ramsey	1,524	22	34.7	99	Aug. 17	-35	Dec. 22	22	16.68	3.59	July	0.06	Feb.	25.3	70	183	70	112	nw.
Ellendale	Dickey	1,457	47	40.4	99	Aug. 17	-23	Dec. 11	47	18.16	2.58	Apr.	0.02	Nov.	37.9	84	130	89	146	nw.
Fargo Airport, 2½ mi. NNW	Cass	895	65	39.8	98	Aug. 17	-25	Dec. 22	65	16.16	3.28	Aug.	0.26	Nov.	27.9	101	77	128	160	n.
Forman	Sargent	1,249	54	41.0	98	Aug. 18	-23	Feb. 18†	54	15.44	3.19	Apr.	0.11	Jan.	34.9	63	192	78	95	nw.
Fullerton	Dickey	1,439	48	41.0	99	Aug. 17	-24	Dec. 11	48	16.54	2.84	Apr.	0.06	Nov.	37.3	88	105	136	124	nw.
Grafton	Walsh	827	54	39.3	101	Aug. 18	-26	Jan. 8	54	16.17	3.85	Sept.	0.23	Feb.	40.2	82	154	98	113	nw.
Grand Forks, 2 mi. W	Grand Forks	830	55	38.7	101	Aug. 18	-29	Dec. 22	55	20.86	4.61	June	0.13	Nov.	41.7	130	107	134	124	n.
Grand Fks Airport, 2½ mi. W	Grand Forks	832	5	37.8	99	Aug. 17†	-30	Dec. 22	5	18.10	3.71	June	0.08	Nov.	42.2	111	77	97	191	nw.
Hankinson	Richland	1,068	17	40.4	98	Aug. 18	-25	Dec. 22	17	17.00	3.97	June	0.12	Jan.	34.5	92	125	76	164	nw.
Hannah	Cavalier	1,568	52	35.1	95	Aug. 17	-31	Jan. 8†	52	18.93	3.64	Sept.	0.34	Feb.	55.5	72	52	128	185	nw.
Hillsboro	Traill	901	40	40.0	100	Sept. 6	-25	Dec. 22	40	20.04	5.22	July	0.06	Nov.	37.0	82	98	134	133	n.
Jamestown, 2 mi. SE	Stutsman	1,457	54	39.8	100	Aug. 18	-32	Dec. 11	54	13.76	3.06	Aug.	0.11	Nov.	30.1	76	114	118	133	nw.
Jamestown Airport, 2 mi. NE	Stutsman	1,492	5	38.6	99	Aug. 18	-30	Dec. 11	5	13.12	2.74	July	0.15	Nov.	22.8	100	91	122	152	nw.
Jensal, 7 mi. SW	Stutsman	1,440	5	34.2	98	July 31	-33	Dec. 11	5	14.19	3.77	July	†	Oct.	28.1	72	131	110	124	nw.
Langdon, 1½ mi. SE	Cavalier	1,615	50	36.0	98	Aug. 17	-32	Dec. 22	50	18.21	3.09	Sept.	0.21	Feb.	43.7	114	87	143	135	nw.
Larimore	Grand Forks	1,134	53	37.7	100	Aug. 17†	-29	Jan. 9	53	14.13	3.00	Sept.	0.01	Nov.	23.4	74	168	66	131	nw.
Lisbon	Ransom	1,091	42	40.5	102	Sept. 6	-26	Dec. 11	42	13.72	2.60	Apr.	0.02	Oct.	41.9	72	148	48	169	nw.
Mayville	Traill	975	50	40.3	98	Aug. 17†	-24	Dec. 11†	50	16.87	3.22	Sept.	0.05	Nov.	32.0	104	76	174	115	n.
McHenry, 6 mi. NNE	Eddy	1,509	23	36.4	98	Sept. 5	-33	Dec. 11	23	15.04	3.75	Sept.	0.14	Nov.	25.8	90	119	112	134	nw.
McLeod, 3 mi. E	Ransom	1,075	34	41.6	98	July 22	-25	Feb. 18	34	14.93	3.78	Sept.	0.00	Oct.	30.9	55	175	91	99	nw.
Milnor	Sargent	1,117	6	38.8	98	Sept. 5†	-27	Feb. 18	13	21.04	3.73	Apr.	0.00	Oct.	41.6	57	190	143	32	nw.
Oakes	Dickey	1,318	17	40.2	98	Aug. 18	-27	Feb. 18	17	13.89	2.55	Apr.	0.07	Nov.	34.2	84	125	103	137	nw.
Park River	Walsh	998	42	36.7	101	Aug. 17	-28	Dec. 11	42	13.96	3.42	Sept.	0.14	Feb.	20.3	74	178	75	112	nw.
Pembina, 1 mi. S	Pembina	795	72	36.3	100	Aug. 17	-28	Jan. 5†	72	21.94	5.87	Sept.	0.14	Feb.	25.8	112	54	159	152	nw.
Petersburg	Nelson	1,524	2	36.9	99	Aug. 18	-25	Dec. 21†	15	15.00	3.23	July	0.08	Nov.	24.5	77	123	127	115	nw.
Sharon	Steele	1,516	19	38.2	98	July 23	-26	Jan. 8	22	15.82	3.38	Sept.	0.04	Nov.	28.7	87	97	141	127	nw.
Valley City	Barnes	1,229	41	40.5	98	July 23	-29	Dec. 11	41	17.42	3.29	Aug.	0.10	Nov.	34.5	96	136	114	115	nw.
Wahpeton	Richland	962	54	42.1	100	Sept. 6	-29	Feb. 18	54	16.51	2.92	June	0.25	Oct.	34.9	90	136	115	114	nw.
Middle Division																				
Ashley, 1 mi. SE	McIntosh	2,025	50	38.7	101	Sept. 5	-29	Feb. 18	50	12.27	2.65	June	†	Nov.	17.3	92	95	121	149	nw.
Bisbee	Towner	1,601	43	37.5	99	Sept. 5	-27	Dec. 17†	43	19.49	3.51	July	0.09	Feb.	38.0	69	145	84	136	nw.
Bismarck	Burleigh	1,670	71	41.1	102	Sept. 5	-27	Dec. 18	71	12.94	3.36	Aug.	0.03	Oct.	32.9	75	84	120	161	nw.
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	6	40.5	102	Sept. 5	-24	Dec. 18	6	12.73	2.76	Aug.	0.07	Oct.	28.3	90	85	119	161	nw.
Bottineau	Bottineau	1,638	54	36.4	95	Aug. 18†	-31	Jan. 8	54	14.70	2.22	July	0.12	Feb.	16.6	83	157	71	137	nw.
Butte, 3 mi. WSW	McLean	1,800	21	38.7	94	Sept. 4	-28	Dec. 22	21	16.55	3.55	July	0.15	Feb.	36.6	78	124	85	156	nw.
Carson, 2½ mi. SW	Grant	2,500	34	40.2	105	Aug. 18	-27	Dec. 17	34	13.31	2.24	Aug.	0.00	Oct.	34.1	57	130	138	97	nw.
Center	Oliver	2,100	8	38.7	100	Sept. 5	-29	Dec. 18	8	13.35	2.56	July	0.18	Oct.	44.4	66	128	141	96	nw.
Drake	McHenry	1,634	16	37.9	98	Sept. 5	-28	Dec. 17†	16	16.78	3.74	July	0.07	Feb.	29.0	81	187	103	75	nw.
Dunsmuir, 2 mi. NNE	Rolette	1,682	50	36.4	93	Aug. 18†	-30	Jan. 8	50	15.09	3.24	June	0.22	Feb.	27.8	75	130	101	134	nw.
Eckman	Bottineau	1,500	40	37.1	97	Sept. 4	-34	Dec. 22	40	15.32	3.46	July	0.10	Feb.	29.4	82	106	152	107	nw.
Fessenden	Wells	1,670	34	38.3	100	Sept. 5	-29	Dec. 11†	34	13.77	3.71	July	0.02	Oct.	30.6	81	131	135	99	n.
Fort Yates	Sioux	1,670	46	42.1	101	Sept. 5	-25	Dec. 18	46	15.14	3.15	July	†	Oct.	22.0	44	211	85	69	nw.
Foxholm, 6½ mi. NE	Ward	1,609	21	37.8	101	Sept. 4	-30	Dec. 22	25	11.36	2.71	June	0.08	Jan.	24.5	85	163	71	131	nw.
Garrison	McLean	1,911	69	38.7	98	Aug. 18	-23	Dec. 18	69	15.51	3.24	July	0.34	Feb.	49.0	85	108	108	149	nw.
Granville	McHenry	1,504	39	38.5	97	Sept. 4	-31	Dec. 11	39	14.33	2.76	Aug.	0.05	Feb.	28.8	84	224	67	74	nw.
Hansboro	Towner	1,597	38	35.7	97	Sept. 5	-27	Dec. 22	38	14.33	2.93	June	0.08	Feb.	52.6	76	135	108	122	nw.
Leeds	Benson	1,515	5	37.7	100	Aug. 18†	-32	Dec. 11	5	15.84	2.97	Mar.	0.16	Feb.	32.0	75	98	171	96	w.
Linton	Emmons	1,711	29	41.9	103	Sept. 5	-28	Dec. 18	29	14.83	3.98	June	0.05	Oct.	†	77	121	88	156	nw.
Maddock, 1 mi. E	Benson	1,604	31	37.8	99	Aug. 18	-29	Dec. 11	31	16.61	3.62	July	0.15	Feb.	39.0	87	81	159	125	nw.
Mandan, 1½ mi. SW	Morton	1,750	32	40.1	101	Sept. 5	-22	Dec. 18	32	14.65	3.48	Aug.	0.04	Oct.	36.7	65	141	43	181	nw.
Max	McLean	2,093	17	37.4	96	Sept. 4†	-25	Dec. 17†	17	13.98	2.71	July	0.18	Feb.	31.4	71	144	80	141	nw.
McClusky	Sheridan	1,943	21	39.6	99	Sept. 5	-26	Dec. 17	28	17.17	2.99	July	0.13	Feb.	42.2	75	141			

Monthly and Annual Mean Temperatures for the Year 1945, with Departures from the Normal

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.
Eastern Division																										
Carrington	9.5	+2.8	11.3	+2.4	31.8	+8.1	36.3	-3.3	44.3	-8.8	55.8	-7.6	66.6	-2.8	65.8	-1.3	53.0	-3.9	44.4	+0.7	19.8	-7.5	4.2	-8.4	36.9	-2.5
Casselton	11.9	+6.9	14.8	+5.7	35.5	+10.8	39.3	-2.4	48.4	-6.3	60.3	-3.6	68.3	-1.6	68.2	+1.1	58.4	+0.5	46.0	+1.3	26.6	-0.4	8.0	-4.8	40.4	+0.5
Cavalier	7.9	.....	10.5	.....	32.8	.....	35.7	.....	45.7	.....	59.4	.....	67.2	.....	63.2	.....	50.8	.....	42.8	.....	19.8	.....	5.0	.....	36.7	.....
Cooperstown	10.6	+6.3	14.0	+6.2	35.2	+10.9	39.8	-0.5	48.0	-5.8	59.2	-4.0	67.9	-1.7	68.0	+0.6	55.3	-2.4	45.6	+0.9	23.8	-3.5	3.9	-9.1	39.2	-0.2
Devils Lake	9.4	+7.6	12.2	+7.1	33.1	+13.3	36.6	-2.2	46.0	-6.6	57.6	-4.3	67.1	-0.3	66.5	+1.7	53.2	-2.7	43.8	+1.4	19.4	-5.1	3.2	-6.3	37.3	+0.3
Edgeley	13.7	+4.9	14.1	+1.3	35.1	+7.8	40.2	-2.4	49.0	-5.4	57.8	-5.8	68.6	-1.3	68.5	+0.8	56.4	-1.9	46.0	+0.4	24.6	-4.7	7.7	-7.3	40.1	-1.2
Edmore	5.8	+5.6	10.4	+5.6	30.8	+9.7	33.9	-5.4	43.0	-10.2	55.0	-7.3	63.7	-3.8	64.2	-0.6	51.0	-5.4	40.2	-2.3	17.6	-7.0	1.2	-9.3	34.7	-2.6
Ellendale	13.5	+3.5	13.8	+0.7	34.8	+7.6	40.2	-2.5	49.7	-5.6	58.8	-6.0	68.4	-2.5	68.2	-0.5	56.4	-2.4	46.2	+0.3	26.6	-1.8	7.8	-8.5	40.4	-1.4
Fargo Airport	10.8	+7.0	13.6	+5.5	35.0	+12.3	39.2	-1.4	48.4	-6.7	60.3	-4.1	68.6	+0.5	68.3	+2.2	56.2	-2.0	46.6	+1.1	26.0	-1.1	6.8	-4.7	39.8	+0.6
Forman	13.5	+6.4	14.8	+4.9	35.5	+9.5	41.0	-3.0	49.6	-6.1	60.4	-4.6	69.8	-0.3	69.1	+0.9	57.3	-2.2	46.8	+3.8	26.1	-2.5	8.6	-6.7	41.0	0.0
Fullerton	14.5	+5.4	14.2	+1.8	35.2	+8.1	40.6	-2.1	50.1	-4.7	59.3	-4.9	69.6	-0.6	69.4	+1.4	57.0	-1.0	46.6	+1.3	26.9	-2.1	8.6	-6.6	41.0	-0.3
Grafton	9.4	+6.8	14.8	+7.5	35.6	+13.9	38.0	-2.6	47.6	-6.5	60.2	-3.5	67.9	-0.9	68.0	+1.8	55.4	-1.6	44.5	+0.7	23.4	-1.6	7.0	-3.7	39.3	+0.8
Grand Forks	8.8	+5.2	13.2	+6.5	34.4	+11.9	37.8	-3.5	47.4	-6.8	61.6	-1.8	67.8	-0.7	67.5	+1.5	53.7	-3.2	43.6	-0.1	23.8	-2.0	4.6	-6.4	38.7	0.0
Grand Forks Airport	7.8	.....	12.2	.....	33.7	.....	36.8	.....	46.0	.....	58.6	.....	67.4	.....	67.0	.....	53.8	.....	42.8	.....	23.6	.....	4.2	.....	37.8	.....
Hankinson	13.1	+5.2	14.2	+0.1	34.4	+5.8	39.1	-4.4	49.2	-8.8	60.6	-6.3	69.6	-1.8	68.2	-2.5	56.0	-4.5	45.2	-1.4	25.2	-3.7	9.8	-7.9	40.4	-2.5
Hannah	5.4	+6.6	9.4	+6.8	30.0	+10.8	34.5	-3.4	44.7	-6.9	56.0	-4.5	65.2	-1.0	63.6	-0.5	52.0	-2.8	41.2	+0.4	17.2	-3.5	1.9	-5.7	35.1	-0.3
Hillsboro	10.4	+5.5	15.3	+5.1	35.6	+10.3	39.2	-3.0	48.2	-6.6	60.2	-4.5	68.0	-2.1	68.0	-0.2	56.5	-2.5	44.9	-0.3	25.6	-1.7	7.5	-0.5	40.0	0.0
Jamestown	12.5	+5.4	15.2	+5.3	35.4	+11.0	40.0	-1.7	49.2	-4.9	59.3	-4.4	68.8	-0.8	67.9	+1.0	55.9	-1.1	44.8	+0.1	22.6	-4.7	5.4	-8.5	39.8	-0.2
Jamestown Airport	11.7	.....	13.2	.....	34.0	.....	37.5	.....	47.3	.....	57.4	.....	67.8	.....	67.4	.....	54.8	.....	44.6	.....	22.8	.....	5.2	.....	38.6	.....
Kensal	11.2	.....	13.8	.....	33.0	.....	37.8	.....	46.9	.....	56.0	.....	67.4	.....	66.2	.....	54.0	.....	44.1	.....	22.0	.....	5.6	.....	38.2	.....
Langdon	6.2	+6.6	10.2	+5.4	31.7	+11.9	35.2	-2.4	45.2	-6.6	57.6	-3.0	65.6	-0.7	64.8	+1.1	52.0	-1.5	42.7	+1.8	18.2	-5.5	2.6	-6.2	36.0	+0.1
Larimore	8.4	+4.6	12.0	+4.3	33.2	+10.5	36.2	-4.0	45.0	-8.4	58.6	-4.3	67.3	-0.8	68.4	+2.5	52.8	-3.6	43.0	-1.1	22.8	-3.0	5.2	-6.3	37.7	-0.8
Lisbon	14.0	+6.4	15.2	+3.6	36.1	+8.8	39.0	-3.1	48.8	-6.0	59.4	-5.0	68.7	-1.7	67.8	0.0	55.3	-2.8	46.2	+1.5	26.6	-2.2	8.9	-5.9	40.5	-0.5
Mayville	11.4	+5.4	16.1	+6.3	36.0	+11.3	39.2	-3.3	48.1	-7.3	60.2	-4.3	69.2	-1.0	69.8	+1.9	55.6	-2.9	45.8	-0.2	25.4	-2.4	7.0	-6.3	40.3	-0.3
McHenry	8.3	+6.8	10.7	+5.3	31.6	+8.6	36.2	-4.4	45.0	-7.7	56.4	-5.4	65.4	-2.7	65.0	-0.7	52.6	-3.2	42.1	-1.2	20.2	-6.4	3.4	-7.4	36.4	-1.5
McLeod	14.0	+5.7	15.4	+2.4	35.0	+7.2	41.5	-2.1	50.6	-5.2	60.4	-4.9	69.4	-2.0	70.5	+2.0	58.3	-1.3	47.6	+1.1	28.1	-1.6	8.5	-6.6	41.6	-0.4
Milnor	10.8	.....	11.6	.....	31.8	.....	35.2	.....	48.8	.....	60.6	.....	69.1	.....	67.4	.....	55.8	.....	44.3	.....	23.8	.....	6.7	.....	38.8	.....
Oakes	14.2	+5.3	14.3	+1.4	35.8	+8.1	39.2	-3.6	48.8	-6.8	58.5	-6.8	68.4	-3.3	67.6	-1.5	54.9	-4.1	47.2	+1.2	25.7	-2.9	7.2	-9.0	40.2	-1.8
Park River	6.9	+4.0	11.3	+3.6	32.7	+9.9	34.6	-5.9	45.2	-8.4	58.1	-5.0	66.8	-1.7	66.5	-0.1	53.1	-3.8	43.6	-0.1	19.0	-8.0	2.2	-8.9	36.7	-2.0
Pembina	6.2	+8.6	10.1	+7.3	32.0	+13.6	34.2	-4.3	44.4	-8.8	58.6	-4.2	66.3	-1.5	65.8	+1.1	52.4	-2.1	41.6	0.0	20.2	-3.2	3.5	-3.5	36.3	+0.3
Petersburg	8.9	.....	12.2	.....	32.8	.....	35.4	.....	44.8	.....	57.0	.....	66.2	.....	66.2	.....	53.2	.....	43.2	.....	19.2	.....	3.6	.....	36.9	.....
Sharon	9.4	+5.9	12.0	+2.5	33.6	+9.4	37.7	-2.1	46.2	-7.9	58.5	-4.5	68.0	-2.8	67.1	-0.8	54.7	-2.7	43.8	+0.2	22.4	-2.3	4.7	-7.5	38.2	-1.0
Valley City	12.9	+6.8	15.0	+3.5	36.0	+9.7	40.6	-1.8	49.8	-5.8	59.6	-4.5	68.3	-1.8	67.6	-0.1	56.2	-2.6	46.2	+1.1	25.4	-2.6	8.6	-5.9	40.5	-0.3
Wahpeton	13.9	+5.2	15.0	+2.6	37.0	+9.4	42.2	-2.0	52.0	-4.3	61.2	-4.6	69.6	-1.3	71.2	+2.5	58.4	-1.6	47.5	+0.5	28.1	-0.9	9.0	-6.8	42.1	-0.1
Middle Division																										
Ashley	12.1	+3.4	11.6	+0.2	31.4	+6.5	33.8	-3.6	48.2	-6.0	55.7	-7.5	67.7	-2.0	67.1	-0.1	54.4	-3.5	44.0	0.0	25.0	-3.0	7.6	-7.2	38.7	-1.9
Bisbee	10.0	+8.2	11.5	+5.0	32.4	+9.9	36.4	-4.3	47.9	-4.8	60.0	-2.1	67.5	-0.1	66.8	+1.1	53.2	-3.5	41.8	-2.0	17.5	-8.9	5.4	-4.3	37.5	-0.5
Bismarck	15.8	+7.8	17.6	+6.0	34.5	+9.3	40.0	-2.5	50.4	-4.4	58.2	-6.0	69.8	-0.7	69.0	+0.8	56.0	-2.1	47.8	+2.6	24.9	-3.6	9.1	-6.6	41.1	0.0
Bismarck Airport	14.7	+8.4	16.7	+8.2	34.0	+12.1	40.0	-0.4	49.6	-3.4	58.0	-4.9	69.6	+0.2	68.8	+2.1	55.6	-1.7	46.4	+2.8	23.9	-2.6	8.6	-4.2	40.5	+1.0
Bottineau	9.0	+7.6	12.3	+7.4	31.4	+10.6	34.2	-4.8	44.6	-7.7	56.9	-4.9	65.9	-1.7	64.6	-0.3	51.4	-4.1	44.9	+3.5	18.2	-5.4	4.0	-4.3	36.4	-0.4
Butte	13.1	+5.2	15.6	+2.5	33.4	+7.0	39.0	-3.3	47.6	-7.2	57.1	-5.4	66.2	-3.8	65.8	-1.4	53.4	-4.1	46.0	+1.2	21.6	-4.9	6.3	-8.5	38.7	-1.9
Carson	16.4	+6.3	18.4	+3.9	35.0	+8.0	38.8	-3.7	47.2	-7.3	55.1	-8.6	68.5	-2.3	69.1	+0.5	54.6	-3.5	47.2	+2.7	22.4	-7.4	9.6	-7.0	40.2	-1.5
Center	14.0	.....	16.9	.....	32.2	.....	39.0	.....	47.2	.....	56.7	.....	67.5	.....	65.4	.....	52.8	.....	43.6	.....	21.4	.....	7.8	.....	38.7	.....
Drake	10.4	+4.9	12.9	+2.5	31.7	+7.0	37.6	-2.8	47.6	-7.1	57.6	-6.2	68.2	-3.4	67.2	-0.4	53.8	-3.8	45.2	+2.1	19.5	-6.4	3.6	-11.8	37.9	-2.2
Dunseith	8.7	+5.9	11.5	+1.8	30.8	+10.3	35.0	-4.5	45.6	-7.2	56.4	-5.0	66.2	-0.8	65.4	+0.8	52.2	-2.8	43.							

Monthly and Annual Precipitation for the Year 1945, with Departures from the Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual		
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	
Eastern Division																											
Carrington	0.17	-0.25	0.13	-0.35	0.90	+0.21	0.60	-0.73	1.27	-1.22	2.12	-1.33	2.49	-0.12	0.70	-1.37	2.71	+1.29	0.13	-0.50	0.27	-0.28	1.14	+0.73	12.63	-4.32	
Casselton	0.30	-0.23	0.63	+0.04	1.34	+0.58	2.03	+0.28	2.22	-0.58	0.76	-2.83	2.65	-0.04	2.14	-0.40	3.29	+1.39	0.21	-1.14	0.20	-0.48	0.51	-0.01	16.28	-3.42	
Cavalier	0.70	+0.03	0.11	-0.40	1.51	+0.75	2.59	+1.20	1.74	-0.52	1.77	-1.31	5.50	+2.86	1.43	-1.08	3.24	+0.92	0.61	-0.68	0.42	-0.32	0.59	-0.10	20.21	+1.35	
Colgate	0.12	-0.36	0.17	-0.32	1.06	+0.26	1.59	-0.07	2.36	-0.34	0.86	-2.62	2.98	+0.45	3.50	+1.02	2.93	+1.10	0.00	-1.11	0.02	-0.65	0.63	+0.10	16.22	-2.54	
Cooperstown	0.44	-0.07	0.28	-0.24	1.04	+0.33	1.04	-0.35	1.07	-1.46	2.05	-1.22	2.87	+0.28	1.98	-0.63	3.47	+1.71	0.28	-0.80	0.05	-0.59	1.21	+0.63	15.78	-2.41	
Courtenay	0.53	-0.08	0.33	-0.25	1.05	+0.21	0.85	-0.58	1.42	-1.01	1.57	-1.63	3.69	+1.07	2.05	-0.35	2.98	+1.14	0.21	-0.94	0.07	-0.50	1.10	+0.43	15.85	-2.49	
Devils Lake	0.39	-0.08	0.35	-0.15	1.70	+0.92	0.66	-0.86	2.79	+0.76	2.54	-1.02	3.47	+0.90	1.75	-0.73	3.83	+2.20	0.44	-0.81	0.53	-0.19	1.12	+0.58	19.57	+1.52	
Edgeley	0.38	-0.11	0.75	+0.27	0.61	-0.22	2.05	+0.30	1.16	-1.40	2.03	-1.64	1.36	-1.21	1.86	-0.49	2.40	+0.74	0.11	-0.91	0.02	-0.50	0.61	+0.12	13.34	-5.05	
Edmore	0.18	-0.31	0.06	-0.35	1.44	+0.75	0.85	-0.41	1.61	-0.25	3.43	+0.32	3.59	+0.75	1.37	-0.66	2.33	+0.48	0.52	-0.46	0.51	-0.11	0.79	+0.25	16.68	-0.30	
Ellendale	0.78	+0.32	1.89	+1.40	1.44	+0.49	2.58	+0.72	1.88	-0.73	2.39	-1.02	1.70	-0.95	2.20	-0.57	2.49	+0.81	0.06	-1.00	0.02	-0.54	0.73	+0.27	18.16	-0.80	
Fargo Airport	0.33	-0.34	0.87	+0.18	1.20	+0.19	2.03	-0.15	2.22	-0.67	0.76	-3.29	1.22	-2.21	3.28	+0.39	2.98	+0.76	0.35	-1.34	0.26	-0.64	0.66	-0.06	16.16	-7.18	
Forman	0.11	-0.34	1.36	+0.86	1.21	+0.41	3.19	+1.18	1.05	-1.90	2.61	-0.96	1.14	-1.74	0.89	-1.86	2.95	+0.88	0.12	-1.23	0.15	-0.42	0.63	+0.07	15.44	-5.05	
Fullerton	0.71	+0.01	1.85	+1.14	0.99	-0.07	2.84	+0.70	1.57	-1.42	2.28	-1.63	0.82	-2.06	2.07	-0.47	2.48	+0.52	0.07	-1.26	0.06	-0.65	0.80	+0.03	16.54	-5.16	
Gackle	1.15	+0.65	0.23	-0.34	0.92	+0.22	0.92	-0.42	1.91	-0.11	2.30	-0.95	1.89	-0.87	0.71	-1.81	3.85	+1.69	0.48	-0.66	0.32	-0.37	1.49	+0.96	16.17	-2.01	
Grafton	0.60	+0.07	0.53	-0.03	1.16	+0.38	1.76	+0.10	1.32	-1.18	4.61	+1.33	2.79	+0.01	2.19	-0.43	3.99	+2.07	0.44	-0.92	0.13	-0.66	1.34	+0.72	20.86	+1.46	
Grand Forks	0.74	-0.07	0.71	-0.03	1.03	-0.18	1.18	-0.06	0.96	-0.96	3.71	-0.99	2.56	-0.03	2.13	-0.03	3.67	-0.31	0.08	-0.08	0.08	-0.08	1.02	-0.08	18.10	-3.64	
Grand Forks Airport	0.12	-0.35	1.27	+0.73	0.92	+0.10	2.01	0.00	0.98	-1.88	3.97	+0.39	2.22	-0.65	1.10	-1.65	2.82	+0.72	0.38	-0.99	0.57	-0.08	0.64	+0.12	17.00	-3.54	
Hankinson	0.40	-0.30	0.34	-0.25	1.31	+0.59	0.64	-0.48	1.57	-0.54	3.09	-0.32	2.03	-0.40	3.48	+1.11	3.64	+1.53	0.41	-0.66	0.16	-0.27	1.06	+0.47	18.93	+1.02	
Hannah	0.34	-0.17	0.42	-0.13	1.04	+0.28	2.15	+0.27	1.80	-1.15	1.18	-2.24	5.22	+2.58	2.80	+0.05	3.43	+1.36	0.50	-0.84	0.07	-0.70	1.10	+0.66	20.04	-0.23	
Hillsboro	0.39	-0.16	0.37	-0.22	0.54	-0.36	1.34	-0.36	0.81	-1.96	1.70	-1.80	1.91	-0.79	3.06	+0.51	2.52	+0.85	0.25	-1.04	0.11	-0.56	0.76	+0.11	13.76	-5.78	
Jamestown	0.20	-0.54	0.54	-0.77	0.77	-0.69	0.69	-0.66	0.66	-0.66	1.57	-0.70	2.74	-2.53	2.53	-2.18	2.53	-2.18	0.28	-0.28	0.15	-0.15	0.81	-0.81	13.12	-17.20	
Jamestown Airport	0.27	-0.51	0.51	-0.88	0.88	-0.41	0.41	-1.85	1.85	-1.85	1.63	-0.99	3.77	-1.18	1.18	-2.49	2.49	-2.49	0.20	-0.20	0.11	-0.11	1.09	-1.09	14.19	-17.20	
Kensal	0.65	+0.04	0.21	-0.42	1.85	+1.07	1.42	+0.19	2.37	+0.38	1.69	-1.55	2.78	+0.28	1.71	-0.76	3.09	+0.86	0.42	-0.61	1.16	+0.43	0.86	+0.23	18.21	+0.14	
Langdon	0.85	+0.25	0.29	-0.26	1.07	+0.26	0.99	-0.61	0.96	-1.77	2.57	-0.99	2.66	-0.88	1.11	-1.60	3.60	+0.95	0.43	-1.01	0.01	-0.81	0.79	+0.23	14.13	-6.24	
Larimore	0.32	-0.27	1.13	+0.54	1.00	+0.27	2.60	+0.67	1.44	-1.33	1.75	-2.15	1.90	-1.00	0.71	-2.19	2.20	+0.20	0.02	-1.22	0.09	-0.54	0.56	+0.05	13.72	-6.97	
Mayville	0.41	+0.02	0.31	-0.13	0.88	+0.19	1.55	0.00	1.40	-1.32	2.36	-1.01	2.76	+0.05	2.34	-0.21	3.22	+1.16	0.45	-0.81	0.05	-0.66	1.14	+0.62	16.87	-2.10	
McHenry	0.19	-0.23	0.45	-0.00	1.13	+0.44	0.71	-0.66	2.01	-0.30	1.83	-1.64	2.97	+0.17	3.74	-1.58	3.75	+2.32	0.32	-0.73	0.14	-0.40	0.80	+0.31	15.04	-2.50	
McLeod	0.25	-0.31	0.89	+0.33	1.45	+0.67	1.98	-0.01	1.82	-1.19	2.07	-1.76	1.43	-1.42	0.50	-2.20	3.78	+1.75	0.00	-1.38	0.24	-0.39	0.52	+0.06	14.93	-5.85	
McVieille	0.18	-0.25	0.25	-0.16	1.26	+0.87	0.87	-1.73	1.73	-1.73	2.28	-0.99	2.92	-1.13	1.13	-2.45	2.45	-2.45	0.20	-0.20	0.09	-0.09	0.84	-0.84	17.20	-3.40	
Milnor	0.20	-0.28	1.58	+1.05	2.98	+2.21	3.73	+1.79	2.78	-0.18	3.11	-0.71	3.08	+0.29	2.28	-0.45	3.33	+1.23	0.00	-1.36	0.44	-0.18	0.53	-0.01	24.04	+3.40	
Oakes	0.28	-0.19	1.31	+0.85	1.03	+0.23	2.55	+0.68	1.45	-1.26	2.29	-1.35	1.05	-1.80	0.79	-1.88	2.30	+0.54	0.12	-1.19	0.07	-0.49	0.65	+0.15	13.89	-5.71	
Park River	0.35	-0.14	1.14	-0.28	1.01	+0.35	1.03	-0.29	1.48	-0.46	2.33	-0.93	2.41	-0.20	0.55	-1.75	3.42	+1.27	0.42	-0.76	0.22	-0.41	0.60	+0.09	13.96	-3.61	
Pembina	0.47	-0.16	1.14	-0.48	1.46	+0.66	1.88	+0.62	1.70	-0.49	2.23	-0.96	3.63	+1.27	3.00	+0.71	5.87	+3.69	0.66	-0.54	0.54	-0.21	0.31	-0.31	21.94	+3.80	
Petersburg	0.62	+0.18	0.32	-0.18	0.68	-0.05	0.59	-0.60	1.37	-1.07	2.85	-0.65	3.23	-0.27	1.25	-1.11	2.72	+0.75	0.47	-0.70	0.08	-0.56	0.82	+0.34	15.00	-3.78	
Sharon	0.34	-0.13	0.22	-0.26	1.21	+0.59	0.81	-0.67	1.23	-1.51	1.65	-1.96	2.61	-0.08	1.16	-0.79	3.38	+1.33	0.28	-1.01	0.04	-0.68	0.89	+0.41	15.82	-3.18	
Valley City	0.32	-0.17	0.70	+0.24	0.61	-0.08	2.43	+0.87	1.77	-0.89	1.39	-1.99	2.34	-0.38	3.29	+1.01	3.10	+1.30	0.12	-1.06	0.10	-0.53	1.25	+0.76	17.42	-0.92	
Wahpeton	0.29	-0.16	0.95	+0.48	1.61	+0.89	1.89	-0.19	2.00	-0.79	2.92	-0.66	2.22	-0.73	0.53	-2.04	2.71	+0.49	0.25	-1.19	0.41	-0.28	0.43	-0.07	16.51	-4.16	
Middle Division																											
Ashley	0.37	-0.07	0.76	+0.31	0.49	-0.34	1.39	-0.22	1.40	-1.00	2.65	-0.77	1.96	-0.70	1.33	-1.11	1.64	+0.17	0.01	-1.05	T.	-0.55	0.27	-0.23	12.27	-5.66	
Bisbee	0.57	+0.12	0.09	-0.27	3.20	+2.49	1.03	-0.16	1.69	-0.46	2.95	-0.41	3.51	+0.81	2.76	+0.41	1.57	-0.12	0.40	-0.59	0.67	+0.20	1.05	+0.62	19.49	+2.64	
Bismarck	0.40	+0.02	0.26	-0.13	0.60	-0.27	1.24	+0.05	1.07	-1.16	1.94	-1.29	1.44	-0.84	3.36	+1.73	1.76	+0.32	0.03	-0.88	0.43	-0.05	0.41	-0.07	12.94	-2.57	
Bismarck Airport	0.39	-0.06	0.21</																								

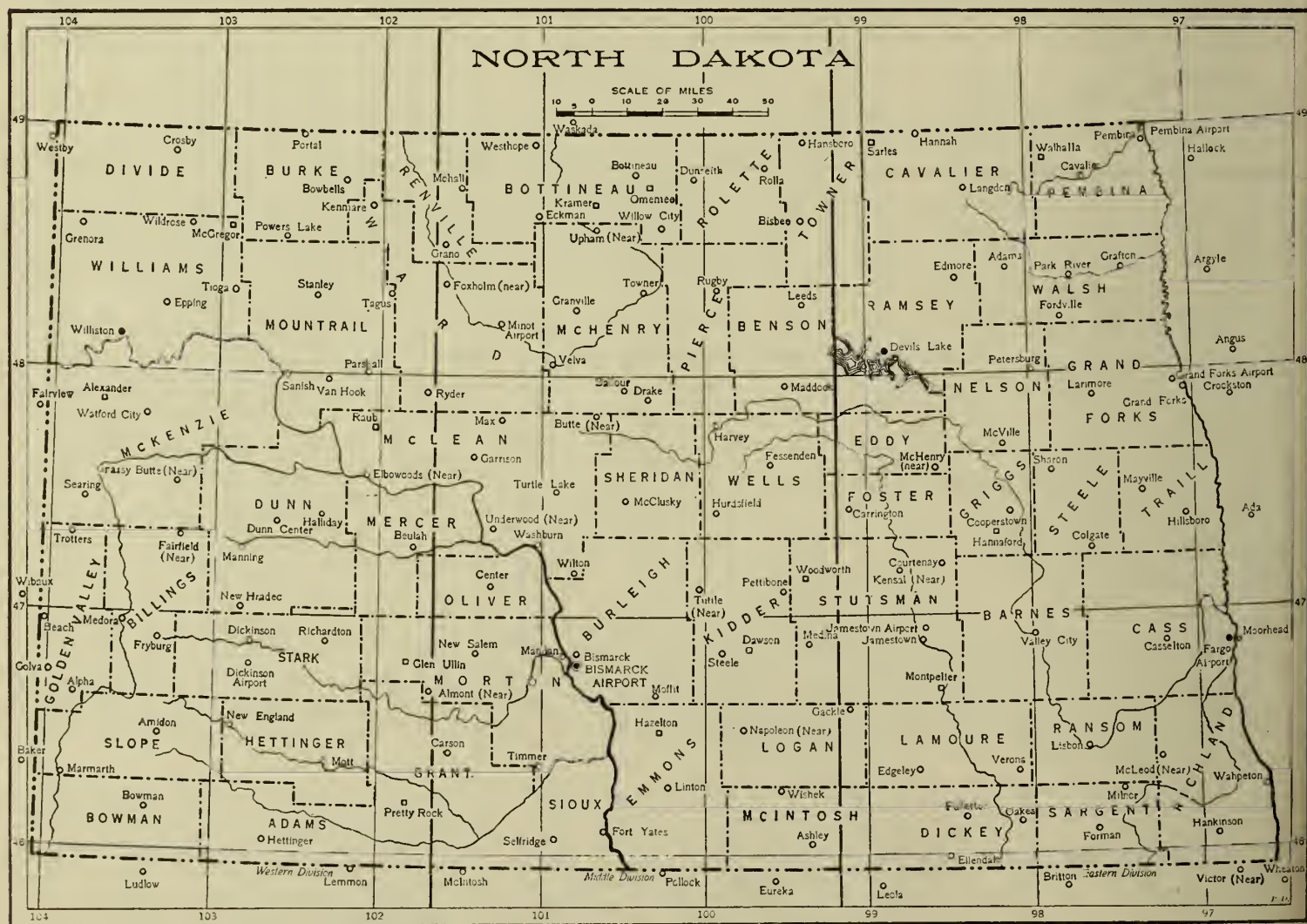
Monthly and Annual Precipitation for the Year 1945, with Departures from the Normal—Continued

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
Western Division—Con.																										
Golva	0.40	-0.06	0.18	-0.22	1.36	+0.61	0.74	-0.44	2.14	-0.12	2.46	-1.13	2.50	+0.70	0.85	-0.75	0.94	-0.33	0.23	-0.67	0.30	-0.16	0.11	-0.36	12.21	-2.90
Grenora	0.37	-0.13	0.16	-0.40	1.38	+0.70	0.81	-0.22	0.63	-1.59	3.73	+0.77	1.18	-0.66	0.26	-1.24	1.32	+0.09	0.91	+0.12	0.84	+0.29	0.82	+0.17	12.41	-2.13
Halliday	0.29		0.13		1.30		0.85		4.40		2.27		1.34		1.97		1.16		0.23		0.89		0.70		15.53	
Hettinger	0.60	+0.24	0.11	-0.32	1.56	+0.90	0.90	-0.16	1.62	-0.66	2.44	-0.72	1.95	-0.33	1.22	-0.32	1.91	+0.61	0.14	-0.57	0.47	+0.07	0.10	-0.27	13.02	-1.53
Kenmare	0.21	-0.14	0.22	-0.17	1.52	+0.87	0.49	-0.43	1.27	-0.71	3.86	+0.97	2.58	+0.28	0.98	-0.93	1.15	-0.42	0.80	-0.16	1.23	+0.69	0.74	+0.31	15.05	+0.16
Marathon	0.74	+0.32	0.29	-0.12	0.85	+0.12	1.27	+0.20	2.11	-0.18	2.55	-0.58	1.55	-0.36	0.87	-0.75	1.47	+0.21	1.08	+0.29	0.40	+0.03	0.61	+0.21	13.79	-0.61
Medora	0.56	+0.02	0.04	-0.35	1.18	+0.42	2.43	+1.28	2.59	+0.41	1.81	-1.61	1.84	-0.05	0.80	-0.72	1.21	-0.11	0.16	-0.62	0.19	-0.29	0.14	-0.34	12.95	-1.96
Mott	0.33	-0.16	0.09	-0.39	1.76	+0.90	0.76	-0.46	3.02	+0.76	2.47	-0.78	1.91	-0.22	1.06	-0.70	1.25	-0.12	T	-0.83	0.83	+0.37	0.10	-0.38	13.58	-2.01
New England	0.82	+0.36	0.49	0.00	2.83	+2.02	2.57	+1.37	1.90	-0.27	3.20	+0.04	3.97	+1.84	1.24	-0.34	1.24	-0.13	0.04	-0.75	0.57	+0.12	0.75	+0.35	19.62	+4.61
New Hradec	0.71		0.19		1.07		1.73		0.94		2.40		0.83		1.33		0.75		0.06		0.39		0.17		10.57	
Parshall	0.31	-0.03	0.03	-0.36	1.25	+0.67	0.45	-0.62	2.27	+0.10	2.84	-0.65	2.51	+0.29	0.32	-1.52	1.04	-0.45	0.39	-0.36	0.47	+0.08	0.30	-0.11	12.18	-2.96
Portal	0.29	-0.11	0.34	-0.04	1.73	+1.12	0.40	-0.54	0.92	-1.15	3.54	+0.45	2.41	+0.34	1.79	-0.17	3.13	+1.67	0.84	0.00	0.91	+0.39	0.49	+0.04	16.79	+2.00
Powers Lake	0.26	-0.26	0.18	-0.27	1.00	+0.30	0.45	-0.69	2.04	-0.11	2.06	-1.23	2.52	+0.25	0.92	-0.76	3.96	+2.67	1.10	+0.05	0.80	+0.31	0.77	+0.23	16.06	+0.49
Richardton	0.49	+0.11	0.52	+0.11	2.54	+1.82	1.74	+0.52	0.99	-1.47	2.89	-0.58	1.91	-0.55	3.28	+1.44	1.40	+0.08	0.10	-0.69	0.72	+0.20	0.15	-0.27	16.73	+0.72
Ryder	0.35	+0.02	0.20	-0.28	1.06	+0.52	0.39	-0.72	1.56	-0.53	2.28	-0.83	2.94	+0.71	0.99	-1.08	1.42	-0.10	0.66	-0.14	0.67	+0.14	0.51	+0.05	13.03	-2.24
Sanish	0.78	+0.30	0.22	-0.23	0.75	+0.17	0.92	-0.20	0.61	-1.34	4.76	+1.39	1.75	-0.27	0.91	-0.69	0.93	-0.41	0.73	-0.04	0.78	+0.25	0.70	+0.25	13.84	-0.82
Stanley	0.72		0.10		1.47		1.31		1.88		1.96		2.44		1.26		1.81		0.63		0.85		0.65		15.08	
Tagus	0.26	-0.10	0.13	-0.29	1.13	+0.51	0.42	-0.73	1.81	-0.18	2.46	-0.59	2.85	+0.80	0.61	-1.17	0.82	-0.58	0.49	-0.29	0.59	+0.06	0.54	+0.12	12.11	-2.44
Tioga	0.50	+0.07	0.36	-0.01	1.60	+0.97	0.66	-0.32	2.15	+0.09	2.01	-1.05	1.61	-0.42	0.43	-1.32	1.84	+0.56	1.04	+0.23	0.63	+0.17	0.84	+0.40	13.67	-0.63
Trotters	0.46	+0.03	0.29	-0.09	1.61	+0.84	1.32	-0.27	0.95	-1.28	2.50	-0.83	0.96	-0.80	1.14	-0.40	0.99	-0.24	0.38	-0.42	1.01	+0.56	0.34	-0.06	11.95	-2.42
Van Hook	0.66		0.22		1.02		0.46		1.36		1.91		2.32		0.27		1.21		0.30		0.61		0.69		11.03	
Watford City	0.39	-0.08	0.22	-0.21	1.90	+1.21	1.28	+0.11	0.82	-1.17	3.13	-0.02	1.46	-0.54	0.70	-0.90	1.35	+0.04	0.49	-0.38	1.65	+1.16	0.73	+0.20	14.12	-0.58
Wildrose	0.55	+0.06	0.11	-0.35	0.84	+0.22	0.53	-0.43	1.08	-0.82	3.72	+0.62	1.60	-0.38	0.42	-1.39	1.45	+0.26	1.12	+0.32	0.77	+0.27	0.85	+0.33	13.04	-1.29
Williston	0.47	-0.07	0.41	0.00	1.40	+0.71	0.43	-0.77	0.99	-1.07	2.61	-0.82	1.11	-0.78	0.33	-1.14	1.51	+0.42	0.72	-0.14	1.18	+0.60	0.66	+0.08	11.82	-2.98

The departures from normal precipitation for stations with 15 years or more of record are computed from a normal or "standard mean," adjusted to a uniform 45-year period; for stations of 10 to 14 years, the means for the period of record are used.

T. Precipitation 0.005 inch or less.
ITALICS. Data interpolated.

CHART SHOWING METEOROLOGICAL STATIONS



CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LV BISMARCK, N. D., JANUARY 1946 No. 1

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Although the temperature averaged more than 4° above the normal, January was a rather disagreeable month due to the high winds and blowing snow. The temperature was above normal on about 21 days. The western division averaged 10° warmer than the eastern division which is twice the usual January difference. Warm and cold air masses moved across the state in rapid succession so temperature changes from day to day were greater than average. During the last 3 days of the month temperatures were below zero all day at most stations.

The precipitation averaged light in all sections but there was much blowing and drifting of the snow. Many sideroads, and at times main highways, were blocked with snow, due partly to the snow that fell during the last part of December. The snow cover at the end of January ranged from about 2 inches in the southwestern part of the state to 15 inches in the Grand Forks area. Considerable feeding of livestock was necessary. More than the usual number of foggy days occurred. Fog was reported in all sections of the state on all days during the first week.

TEMPERATURE

The mean temperature for the state was 11.2°, or 4.3° above the 1892-1946 average for January. The mean temperature for the eastern division was 6.8°; for the middle division, 10.2°; and for the western division, 16.6°. The highest mean temperature was 24.7° at Bowman and Hettinger, and the lowest, 1.9° at Edmore, making a range in mean temperature of 22.8°. The absolute range was 89°, from 56° at Medora on the 4th, to -33° at Pembina on the 26th. The average daily excess in temperature for the state since January 1, 1946, is 4.3°.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes - inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.67	14	29.31	5	10.1	40	n.	23	84	88	78	82	61	1651
Devils Lake...	30.67	15	29.30	5	9.4	30	n.	25	82	79	79	82	42	1825
Fargo.....	30.71	15	29.28	5	13.2	37	n.	25	88	88	84	87	43	1767
Williston.....	30.54	14	29.30	5	7.1	34	nw.	31	85	87	78	78	35	1549

† And other dates.

PRECIPITATION

The average precipitation for the state was 0.20 inch, or 0.27 inch less than the 1892-1946 average for January. In the eastern division the average amount was 0.27 inch; in the middle division, 0.23 inch; and in the western division, 0.10 inch. The greatest monthly amount reported was 0.83 inch at Grafton and Minot; there was only a trace reported at 12 stations. The greatest amount recorded in any 24 consecutive hours was 0.43 inch at Minot on the 23d. The accumulated deficiency in precipitation for the state since January 1, 1946, is 0.27 inch. The average snowfall was 2.9 inches.

COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	3.3	58	-52	0.31	0.41	0.25	0.32	2.8	4	15	8	8
1893...	0.8	52	-48	0.93	0.94	1.11	0.99	8.4	7	11	11	9
1894...	0.6	60	-47	0.38	0.40	0.38	0.39	3.6	4	13	9	7
1895...	-2.9	42	-46	0.53	0.69	0.47	0.56	5.5	5	16	8	7
1896...	5.3	58	-42	0.75	0.77	0.80	0.77	6.6	6	9	9	13
1897...	3.6	49	-38	0.91	0.64	0.76	0.77	7.5	5	11	9	11
1898...	14.6	69	-32	0.14	0.12	0.07	0.11	1.1	2	15	8	8
1899...	5.2	55	-41	0.29	0.20	0.26	0.25	2.4	3	13	9	9
1900...	15.4	70	-30	0.27	0.27	0.12	0.22	2.0	3	15	9	7
1901...	7.7	68	-39	0.29	0.29	0.26	0.28	3.0	4	14	8	9
1902...	12.7	51	-40	0.17	0.03	0.23	0.14	1.4	2	17	7	7
1903...	9.4	56	-37	0.72	0.58	0.68	0.66	6.7	5	13	8	10
1904...	3.6	50	-52	0.41	0.36	0.42	0.40	4.0	5	15	6	10
1905...	0.9	48	-40	0.26	0.30	0.41	0.32	2.9	3	15	8	8
1906...	12.2	60	-38	0.75	0.72	0.61	0.69	6.9	4	14	6	11
1907...	-6.2	45	-45	1.77	1.13	1.05	1.32	14.5	8	12	8	11
1908...	17.0	70	-41	0.21	0.16	0.34	0.24	1.9	2	17	8	6
1909...	3.5	53	-48	0.60	0.32	0.37	0.43	4.3	4	14	8	9
1910...	9.4	49	-35	0.30	0.21	0.59	0.37	4.1	3	16	8	7
1911...	-1.0	56	-43	0.86	0.96	0.69	0.84	8.5	6	11	8	12
1912...	-4.6	63	-52	0.34	0.34	0.36	0.35	3.6	4	16	6	9
1913...	3.2	60	-54	0.51	0.40	0.43	0.45	4.6	5	12	9	10
1914...	14.8	62	-38	0.56	0.48	0.40	0.48	4.9	4	12	8	11
1915...	5.8	51	-48	0.39	0.24	0.25	0.29	3.4	3	12	9	10
1916...	-6.4	49	-56	1.58	1.24	1.26	1.36	15.1	6	13	8	10
1917...	1.7	47	-46	0.82	0.69	0.65	0.72	8.6	5	13	8	10
1918...	0.5	48	-44	0.41	0.43	0.58	0.47	5.0	5	12	8	11
1919...	18.7	66	-44	0.24	0.21	0.10	0.18	1.7	2	17	8	6
1920...	2.7	49	-44	1.26	0.96	0.68	0.97	10.0	5	10	9	12
1921...	15.9	52	-31	0.29	0.20	0.22	0.24	2.5	2	13	9	9
1922...	7.0	55	-46	0.68	0.36	0.42	0.49	5.2	5	12	9	10
1923...	10.1	56	-35	0.59	0.43	0.54	0.52	6.0	5	9	9	13
1924...	2.6	61	-42	0.30	0.20	0.18	0.23	2.5	3	14	9	8
1925...	8.6	52	-35	0.33	0.18	0.22	0.24	2.5	3	11	10	10
1926...	16.3	55	-30	0.31	0.34	0.49	0.38	4.1	4	13	8	10
1927...	10.1	60	-44	0.50	0.36	0.41	0.42	4.3	4	14	8	9
1928...	13.0	50	-41	0.21	0.19	0.19	0.20	2.3	3	14	9	8
1929...	-4.8	42	-42	0.76	0.48	0.63	0.62	9.2	6	13	8	10
1930...	-1.9	41	-43	0.26	0.22	0.40	0.29	2.7	4	12	9	10
1931...	21.4	68	-31	0.15	0.15	0.14	0.15	1.4	2	15	8	8
1932...	9.5	50	-34	0.47	0.62	0.59	0.56	6.3	4	12	7	12
1933...	11.8	53	-30	0.92	0.70	0.79	0.80	10.0	7	12	7	12
1934...	15.8	54	-36	0.29	0.14	0.17	0.20	2.0	3	11	9	11
1935...	3.3	60	-44	0.55	0.29	0.39	0.41	4.9	6	8	10	13
1936...	-5.8	43	-44	0.51	0.48	0.69	0.56	6.9	7	11	8	12
1937...	-8.3	38	-44	1.04	0.55	0.42	0.67	9.0	6	13	8	10
1938...	9.5	50	-40	0.36	0.42	0.67	0.48	6.1	6	10	9	12
1939...	15.0	55	-32	0.56	0.32	0.54	0.47	6.0	6	8	10	13
1940...	3.4	48	-39	0.10	0.11	0.10	0.10	1.4	3	13	9	9
1941...	11.0	53	-33	0.80	0.56	0.25	0.54	6.3	5	10	7	14
1942...	18.3	60	-35	0.09	0.08	0.10	0.09	1.0	2	16	7	8
1943...	-1.4	45	-44	0.42	0.74	1.02	0.73	9.4	7	10	8	13
1944...	21.8	61	-26	0.26	0.33	0.51	0.37	4.8	3	16	8	7
1945...	12.7	51	-31	0.40	0.37	0.45	0.41	5.6	5	8	8	15
1946...	11.2	56	-33	0.27	0.23	0.10	0.20	2.9	4	10	11	10
Period	6.9	70	-56	0.52	0.43	0.46	0.47	5.1	4	13	8	10

Climatological Data for January 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 40 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	5.2		33	22	-31	15	0.30		0.08	14†	4.3	7	8	16	7	nw.	Albert Thoren.
Carrington	Foster	1,579	49	7.2	+0.5	34	10†	-21	31	0.15	-0.27	0.06	30	3.8	4	12	7	12	.....	Soo Line Agent.
Casselton	Cass	934	51	7.4	+2.4	33	10	-27	15	0.23	-0.30	0.06	14	3.1	6	8	17	6	n.	C. Hayford.
Cavalier	Pembina	894	39	3.2		32	22	-27	15	0.32	-0.35	0.07	18	9.5	6	9	16	6	n.	City Light & Power Co.
Colgate	Steele	1,180	13							0.45	-0.03	0.14	30	6.2	5	15	4	12	n.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	5.2	+0.9	31	22	-30	15	0.29	-0.22	0.14	14	4.3	3	14	3	14	sw.	R. J. Lockner
Courtenay	Stutsman	1,523	16							0.09	-0.52	0.03	14†	1.5	3	4	23	4	se.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	71	6.0	+4.2	32	4	-24	31	0.29	-0.18	0.09	13-14	5.3	9	9	7	15	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,508	46	10.2	+1.4	36	23	-22	15†	0.11	-0.38	0.03	5-6†	1.6	5	10	17	4	s.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	1.9	+1.7	33	4	-31	15	0.34	-0.15	0.10	13-14	3.6	6	13	7	11	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	9.6	-0.4	37	17	-21	15	0.16	-0.30	0.06	30	2.1	5	7	7	17	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	8.0	+4.2	29	10	-27	15	0.32	-0.35	0.12	13-14	3.3	9	6	11	14	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	9.6	+2.5	34	22	-25	15†	0.07	-0.38	0.04	30	1.1	2	11	8	12	s.	Helge Dyste.
Fullerton	Dickey	1,439	49	10.8	+1.7	37	23	-21	15	0.10	-0.60	0.03	25	1.0	5	11	11	9	s.	F. O. Alin.
Gackle	Logan	1,951	16																	Mrs. Walter Kranzler.
Grafton	Walsh	827	55	5.2	+2.6	29	11	-27	15	0.83	+0.33	0.26	20	10.2	8	14	7	10	s.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	5.6	+2.0	27	8†	-27	15	0.43	-0.10	0.19	27-28	5.9	8	14	6	11	n.	University of N. Dak.
Grand Forks Aprt. 2 1/2 mi. W	Grand Forks	834	6	4.4		27	8	-27	15	0.69		0.14	24	7.6	12	8	7	16	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	11.4	+3.5	38	17†	-25	16	0.14	-0.33	0.09	30	2.0	4	13	6	12	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	53	2.2	+3.4	31	4†	-28	26	0.42	-0.28	0.14	24-25	9.0	5	3	8	20	nw.	A. E. Prior.
Hillsboro	Traill	901	41	7.8	+2.9	30	22†	-29	15	0.58	+0.07	0.20	30	9.4	7	6	10	15	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	8.8	+1.7	36	22	-25	15	0.18	-0.37	0.09	30	3.1	3	20	3	8	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	6	9.0		36	22	-22	15	0.57		0.23	29-30	6.1	10	9	8	14	s.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	7.7		34	10†	-25	15†	0.14		0.05	14	2.5	4	9	16	6	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	3.6	+4.0	34	4	-28	26	0.69	+0.08	0.14	25	8.0	14	11	10	10	s.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	5.0	+1.2	32	23	-23	26	T.	-0.60	T.	1†	T.	0	13	7	11	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	9.8	+2.2	37	8	-22	15†	0.08	-0.51	0.04	14	1.2	3	15	4	12	nw.	J. O. Halverson.
Mayville	Traill	975	51	6.4	+0.4	29	22	-25	15	0.27	-0.12	0.09	25	3.6	9	6	16	9	s.	H. A. Ragaz.
McHenry, 3 miles NE	Eddy	1,509	24	5.0	+3.5	32	22	-27	15	0.33	-0.09	0.12	29-30	4.2	4	11	9	11	s.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	7.6	-0.7	35	23	-27	15	0.06	-0.50	0.06	31	1.0	1	12	10	9	sw.	J. G. Carlson.
McVille	Nelson	1,467	5																	A. M. Casad.
Milnor	Sargent	1,117	14	5.4		30	23	-25	15†	0.04	-0.44	0.04	29	0.5	1	14	13	4	nw.	E. W. Wilson.
Oakes	Dickey	1,318	18	9.8	+0.9	36	22	-24	15	0.10	-0.37	0.04	23	1.3	3	12	7	12	sw.	H. M. Blazer.
Park River	Walsh	998	43	3.0	+0.1	30	4	-26	15†	0.23	-0.26	0.12	13	3.3	4	16	5	10	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	2.6	-5.0	29	16	-33	26	0.24	-0.39	0.11	24	2.4	7	9	5	17	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	4.2		30	4	-24	15†	0.12	-0.32	0.11	25	2.1	2	8	13	10	nw.	T. C. Overland.
Sharon	Steele	1,516	23	4.9	+1.4	32	22	-25	15	0.38	-0.09	0.20	19	4.3	6	7	13	11	w.	Nels O. Greisheim.
Valley City	Barnes	1,229	42	9.5	+3.4	33	17†	-23	15	0.27	-0.22	0.05	14†	3.9	7	14	8	9	s.	Hettie Blythe.
Wahpeton	Richland	962	55	7.8	-0.9	30	10†	-26	15	0.05	-0.37	0.08	27	1.5	1	13	5	13	se.	State School of Science.
Average for Eastern Division				6.8	+1.9	38	17†	-33	26	0.27	-0.25	0.26	20	3.8	5	11	9	11	s.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	10.5	+1.8	38	3†	-26	15	0.13	-0.31	0.06	30	1.9	4	10	9	12	nw.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,990	2	5.4		38	8	-29	26	0.31		0.12	28	4.9	3	3	16	12	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	5.0	+3.2	39	5	-26	26†	0.83	+0.33	0.31	25	12.0	7	5	8	18	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	12.9	+4.9	43	22	-19	15	0.07	-0.31	0.03	23	1.1	4	4	13	14	nw.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE	Burleigh	1,650	7	11.8	+5.5	41	17	-23	15	0.07	-0.38	0.02	27†	1.0	5	4	13	14	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	8.4	+7.0	34	4	-30	26	0.28	-0.13	0.10	14-15	4.1	6	6	14	11	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	12.8	+4.9	40	3†	-19	31	0.30	-0.06	0.15	6	3.4	3	10	9	12	sw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	15.6	+5.5	40	3	-18	26	0.01	-0.35	0.01	22	0.2	1	5	21	5	nw.	J. W. Evans.
Center	Oliver	2,100	9	11.5		42	4	-23	15†	0.15		0.06	30	3.1	3	10	13	8	nw.	Fred L. Hein.
Drake	McHenry	1,634	17	9.4	+3.9	36	3†	-21	22†	0.24	-0.15	0.14	14	3.3	4	15	12	4	se.	Geo. A. Paulus.
Dunsmuir, 2 miles NNE	Rolette	1,682	51	6.8	+4.0	36	8	-26	26	0.17	-0.26	0.10	30	2.5	3	11	8	12	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	41	7.5	+4.4	35	4†	-27	26	0.27	-0.09	0.09	29-30	2.9	7	5	18	8	se.	E. R. Sherman.
Fessenden	Wells	1,610	35	8.9	+4.2	35	4	-28	25	0.51	+0.02	0.11	26	7.6	7	4	8	19	n.	John V. Zuber.
Fort Yates	Sioux	1,670	47	16.2	+6.6	46	22	-18	15	T.	-0.39	T.	6†	T.	0	18	6	7	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,657	26	11.6	+4.8	39	4	-20	31	0.16	-0.28	0.04	31	3.4	7	5	11	15	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	11.7	+3.8	39	4	-20	31	0.33	-0.04	0.08	29-30	4.5	8	7	15	9	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	40	11.2	+6.1	40	4	-22	31	0.31	-0.07	0.10	6	4.0	6	18	7	6	nw.	Fred Roble.
Hansboro	Towner	1,597	39	4.6	+4.0	36	8	-28	26	0.45	-0.16	0.15	25	12.0	7	10	10	11	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,506	44							0.15	-0.33	0.05	6	2.2	4	4	22	5	sw.	H. J. Reynolds.
Leeds	Benson	1,515	6	7.0		36	4	-25	31	0.19		0.09	29	2.9	4	9	17	5	w.	John Dulmage.
Linton	Kimmons	1,711	30	15.0	+5.7	45	22	-20	15†	0.07	-0.27	0.06	23	0.8	2	13	10	8	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	7.0	+2.4	34	4	-27	31	0.68	+0.26	0.20	30	10.1	5	6	15	10	nw.	Benson Cr. A. & T. Sch.
Mandan																				

Climatological Data for January 1946-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Elbowoods	McLean	2,082	54	14.4	+5.8	42	10†	-24	26	0.19	-0.14	0.10	6	3.4	5	17	12	2	nw.	H. W. Case.	
Epping	Williams	2,224	38	12.7	+7.5	35	4†	-22	26	0.07	-0.42	0.02	24†	0.9	5	19	6	6	w.	T. Beachler.	
Fairfield, 9½ miles N.	Billings	2,650	18							0.11	-0.33	0.08	22-23	0.9	2	14	5	12	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N.	Billings	2,790	29	22.5		49	3	-15	26†	0.26	-0.20	0.07	23	3.0	6	10	13	8	nw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,781	6	20.2	+8.1	50	3†	-17	25†	0.13	-0.33	0.07	22-23	1.3	6	7	16	8	w.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	38	14.6	+9.7	41	17	-20	26	0.03	-0.47	0.03	25	1.0	1	12	17	2	nw.	L. D. Nielson.	
Halliday	Dunn	2,073	5							0.07		0.03	23	3.0	3	8	20	3	nw.	John Kisse.	
Hettinger	Adams	2,675	40	24.7	+11.0	54	3	-12	26	0.01	-0.35	0.01	12	0.1	1	14	13	4	nw.	Edgar Martin.	
Kenmare	Ward	1,799	15	11.0	+5.2	40	4	-18	31	0.24	-0.11	0.06	13†	3.7	6	2	13	16	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	38	23.0	+9.5	51	17	-12	26	0.18	-0.24	0.06	23†	3.2	4	15	7	9	nw.	S. P. Grane.	
Medora, 1½ mi. W.	Billings	2,271	32	22.8		56	4	-15	25†	0.04	-0.50	0.03	22	0.7	2	13	7	11	w.	Harry Roberts.	
Mott	Hettinger	2,424	40	20.0	+9.8	48	17	-15	26	T.	-0.49	T.	12†	T.	0	8	12	11	nw.	Northern Pacific Agent.	
New England	Hettinger	2,621	55	22.7	+9.2	51	17	-14	26	0.05	-0.41	0.02	22-23	0.6	4	13	17	1	nw.	F. S. Sleight.	
New Hradec, 1 mile E.	Dunn		5	20.5		46	17	-13	26†	0.04		0.02	4	0.2	3	13	10	8	sw.	Peter F. Ficek.	
Parshall	Mountrail	1,929	32	11.0	+4.7	38	22	-22	21†	0.10	-0.24	0.05	24	2.0	3	2	25	4	sw.	C. E. Shubert.	
Portal	Burke	1,954	33	8.0	+5.0	37	4	-23	26	0.37	-0.03	0.11	22	4.9	4	9	16	6	sw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	42	12.4	+4.3	37	4	-21	31	0.04	-0.48	0.02	25†	0.7	2	4	15	12	nw.	E. J. Lewis.	
Richardton, 1½ miles N.	Stark	2,467	31	19.6	+8.5	45	22	-15	26	0.02	-0.36	0.02	21	0.5	1	12	8	11	w.	Assumption Abbey.	
Ryder	Ward	2,108	18							T.	-0.48	T.	4†	T.	0	10	10	11	w.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	21	7.9	+2.8	37	21	-21	31	T.		T.	6†	T.	0	4	20	7	w.	H. J. Bugge.	
Stanley	Mountrail	2,258	9	9.5		38	4	-23	26	T.		T.	6†	T.	0	4	20	7	w.	Leroy Edwards.	
Tagus	Mountrail	2,179	18							0.20	-0.16	0.05	27	2.4	0	12	12	7	nw.	Geo. N. Pilgard.	
Tioga	Williams	2,279	18							T.	-0.43	T.	11†	T.	0	3	21	7	sw.	L. A. Simon.	
Trotters	Golden Valley		21							0.32	-0.11	0.13	4	2.6	0	1	23	7	sw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	6	12.4		40	10†	-19	26	0.19		0.07	24-25	3.7	7	10	14	7	n.	H. Glenn Sims.	
Watford City	McKenzie	2,084	34	16.3	+6.5	42	22	-19	26	0.19	-0.28	0.06	24	1.9	5	6	21	4	sw.	J. C. Zeller.	
Wildrose	Williams	2,258	17							0.05	-0.44	0.05	23	0.8	1	16	6	9	sw.	Jonathan Winkjer.	
Williston	Williams	1,878	68	14.9	+8.5	40	22	-16	25†	0.15	-0.39	0.05	31	1.5	5	11	15	5	s.	U. S. Weather Bureau.	
Average for Western Division				16.6	+7.3	56	4	-24	26	0.10	-0.36	0.13	4	1.4	3	10	13	8	nw.		
Average for the State				11.2	+4.8	56	4	-33	26	0.20	-0.27	0.43	23	2.9	4	10	11	10	nw.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for January 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum...	18	23	38	31	35	23	20	33	26	32	29	11	37	35	13	32	33	24	17	17	5	38	35	32	24	10	31	31	15	-3	21	24.7
	Minimum...	-1	-4	5	1	1	-1	-8	12	7	13	2	-5	-5	-23	-26	11	8	-7	-5	-8	-18	-2	9	-2	-20	-22	6	1	-4	-14	-19	-3.7
Bismarck Airport	Maximum...	17	19	27	39	30	22	26	37	31	40	29	12	29	28	22	33	41	26	25	19	14	40	37	37	23	18	30	26	7	1	8	25.6
	Minimum...	7	1	2	12	6	-5	-12	13	5	7	9	-2	-4	-20	-23	11	3	-3	-4	-3	-16	8	8	-3	-15	-16	10	1	-5	-16	-20	-2.1
Botineau	Maximum...	15	19	31	34	33	28	20	27	24	28	-7	7	6	10	3	25	29	28	11	10	0	33	29	22	21	2	15	12	3	-1	3	17.7
	Minimum...	-1	7	7	13	12	3	8	18	11	15	6	-4	-7	-7	16	3	17	4	0	-6	-19	-1	8	8	-20	-30	0	1	-9	-14	-20	-0.9
Carson	Maximum...	20	25	40	35	35	20	28	35	34	37	28	12	39	36	22	30	38	30	24	14	14	39	36	19	17	14	34	37	25	0	28	27.6
	Minimum...	10	7	20	20	17	7	4	14	9	18	8	0	-3	-5	-10	17	11	3	-4	-1	-17	8	17	10	-15	-18	8	8	-5	-10	-17	3.6
Crosby	Maximum...	18	18	26	32	27	11	32	28	23	34	10	12	27	6	25	29	36	19	20	2	19	35	22	27	13	17	26	15	-6	-3	1	18.5
	Minimum...	10	4	4	15	17	10	0	5	7	8	6	-4	-5	-1	-16	-2	7	15	1	-4	-15	-6	16	3	-17	-21	-21	1	-10	-10	-19	-0.6
Devils Lake	Maximum...	13	14	28	32	26	22	19	28	20	31	29	2	11	10	6	26	30	23	14	8	1	30	29	25	14	10	17	4	0	-5	-5	16.5
	Minimum...	-7	5	4	21	7	2	-1	13	7	12	-4	-14	-15	-15	-22	6	7	-6	-4	-13	-20	1	-1	-2	-19	-22	0	-9	-10	-12	-24	-4.4
Dickinson Airport	Maximum...	29	38	44	39	40	23	35	37	37	40	22	19	41	32	32	37	46	34	36	26	28	44	32	38	24	21	30	39	14	3	28	31.9
	Minimum...	12	17	26	26	22	13	10	19	16	21	6	6	9	2	-1	19	17	4	4	-3	-7	20	11	11	-13	-13	13	12	-3	-12	-1	8.4
Dunn Center	Maximum...	23	31	41	40	41	27	31	33	34	41	32	13	38	39	29	35	44	38	32	24	22	44	40	37	37	19	30	36	21	-1	25	31.5
	Minimum...	13	-2	3	25	14	8	2	18	13	22	8	6	-4	-3	-11	18	6	3	-1	1	-10	12	20	5	-14	-15	7	10	-3	-12	-10	4.2
Fargo Airport	Maximum...	9	17	24	21	24	26	20	27	25	29	26	1	17	18	4	26	26	27	14	12	-1	26	26	22	23	14	22	19	18	7	0	18.4
	Minimum...	-11	7	15	13	18	19	3	13	9	9	-6	-10	-6	-22	-27	4	4	-5	-2	-8	-13	-6	3	-9	-19	-22	-1	-5	-5	-8	-15	-2.4
Fessenden	Maximum...	23	12	29	35	29	20	24	24	22	31	30	13	22	19	12	30	34	29	16	11	3	34	31	29	28	27	25	2	-1	-1	-1	20.7
	Minimum...	-13	5	4	19	7	12	-3	13	7	14	1	-9	-13	-13	-18	6	8	-3	-7	-6	-20	-10	7	0	-28	0	-1	-6	-8	-13	-22	-2.9
Fullerton	Maximum...	14	15	25	23	22	27	21	29	30	30	32	20	15	20	8	33	36	33	16	18	5	35	37	26	25	4	30	30	24	2	9	22.6
	Minimum...	-13	-3	4	5	15	12	-8	3	9	5	10	0	8	0	-21	3	6	0	-6	-2	-13	-10	15	-2	-10	-19	2	5	2	-9	-17	-0.8
Garrison	Maximum...	20	22	32	39	35	19	24	35	29	32	23	7	23	22	21	31	33	28	23	13	9	38	32	31	18	13	29	21	0	-1	6	22.8
	Minimum...	12	8	8	20	15	2	-3	16	12	15	7	-7	-7	-13	-16	16	9	0	-2	-5	-17	9	10	5	-16	-19	4	0	-8	-15	-20	0.6
Golva	Maximum...	38	42	50	43	43	28	38	36	35	43	21	22	42	33	43	39	50	32	38	21	35	50	32	39	23	19	31	33	8	3	30	33.6
	Minimum...	21	22	26	28	25	14	9	17	16	19	5	3	12	-5	-3	8	10	13	11	-7	-13	5	7	5	-17	-17	11	1	-6	-13	0	6.7
Grafton	Maximum...	8	21	19	25	25	26	22	24	27	21	29	3	10	12	-3	27	27	28	12	15	2	27	25	18	19	-2	10	9	3	0	-1	15.7
	Minimum...	-18	6	1	10	20	-8	-9	5	7	1	-5	-25	-14	-27	-6	13	-5	-7	-3	-14	-13	9	-11	-18	-24	-8	-8	-4	-11	-17	-5.3	
Grand Forks Airport	Maximum...	8	14	19	22	26	18	2	26	25	27	25	-1	12	10	1	26	22	21	14	10	-2	24	25	18	11	10	13	6	8	-4	-4	14.5
	Minimum...	-9	6	7	8	21	15	-5	12	6	3	-5	-15	-20	-27	-28	1	8	-10	-4	-10	-15	-7	2	-10	-23	-27	-8	-12	-5	-9	-21	-6.0
Jamestown Airport	Maximum...	16	16	29	29	25	27	17	30	26	32	29	7	21	22	8	29	34	31	15	13	2	36	33	30	20	15	27	17	5	-3	3	20.2
	Minimum...	-2	1	5	8	4	12	-6	14	9	10	1	-12	8	-17	-22	6	6	-7	-4	-5	-15	-3	6	-2	-18	-20	5	-1	-3	-10	-20	-2.2
Kenmare	Maximum...	18	27	35	40	31	19	32	30	29	36	13	9	28	8	28	30	38	22	20	3	25	35	23	26	6	17	27	11	-6	-3	5	20.0
	Minimum...	-3	3	3	23	23	14	6	11	16	16	11	-5	-6	-3	-14	-4	14	9	-2	-5	-14	-6	16	9	-6	-16	-15	4	-9	-11	-18	-1.3
Langdon	Maximum...	9	14	21	34	32	23	19	25	21	24	15	3	4	2	-1	26	23	18	10	-10	-4	25	24	23	-22	-6	10	7	-2	-3	1	13.3
	Minimum...	-6	-2	2	10	10	15	-6	12	-1	10	-1	-16	-24	-18	-25	-3	9	10	-12	-10	-24	-12	11	-10	-22	-28	-10	-12	-14	-14	-27	-6.6
Marmarth	Maximum...	40	43	48	43	42	31	36	38	38	42	30	20	42	42	45	40	51	35	39	27	36	48	38	45	35	20	34	35	25	5	32	36.3
	Minimum...	19	19	21	23	21	20	11	22	10	18	12	10	7	10	2	5	12	17	15	14	-5	15	25	5	-5	-12	8	7	-3	-10	-9	9.9
Minot Airport	Maximum...	16	24	34	37	33	22	27	32	28	36	22	8	14	10	25	27	35	28	17	5	18	35	32	26	17	10	25	14	-1	-5	-4	20.5
	Minimum...	12	7	7	25	17	5	5	17	16	20	4	-8	1	-13	-10	18	13	-3	-2	-7	-17	18	10	9	-16	-17	6	-4	-12	-18	-18	2.0
Mott	Maximum...	38	40	38	40	42	38	36	42	40	40	30	20	40	36	32	36	48	36	38	-27	23	42	40	42	36	23	33	42	20	-2	31	34.3
	Minimum...	10	11	10	10	12	11	-2	14	12	10	8	6	-2	-2	-4	16	10	1	8	-13	12	22	10	7	-15	13	20	2	-10	-9	13.0	
Pembina Airport	Maximum...	6	15	21	27	26	27	16	24	26	22	22	-2	7	6	-1	29	25	25	13	6	-1	21	21	18	14	7	7	7	1	-5	-7	15.3
	Minimum...	-11	-7	5	9	19	8	8	10	7	0	-7	-23	-27	-29	-29	-4	6	-10	-6	-10	-16	-6	-1	-8	-23	-33	-14	-13	-11	-14	-20	-8.4
Sharon	Maximum...	12	15	26	30	20	23	12	22	25	26	27	0	10	10	0	28	31	20	10	8	-3	32	23	23	18	8	18	18	-1	-2	0	15.0
	Minimum...	-18	8	5	11	6	11	-5	6	5	10	0	-12	-19	-10	-25	-5	4	-10	-10	-8	-19	-11	6	-9	-17	-24	-7	-9	-6	-11	-22	-6.6
Steele	Maximum...	18	19	31	33	25	24	28	33	28	29	26	9	23	26	11	29	34	29	16	15	1	32	35	28	30	8	28	28	-3	11	23.0	
	Minimum...	-11	6	7	13	5	10	-8	17	5	11	7	2	-6	-9	-21	8	8	-1	-7	-2	-19	-8	18	-1	-13	-22	3	4	-4	-11	-24	-0.4
Valley City	Maximum...	15	16	26	30	21	27	23	32	29	26	30	11	16	20	5	31	33	30	15	15	4	33	30	23	29	5	22	26	8	2	4	20.0
	Minimum...	-17	11	7	6	9	8	-1	11	9	11	11	-3	-9	-6	-23	0	6	-4	-6	-1	-14	-8	14	-4	-12	-20	2	1	2	-6	-19	-1.1
Wahpeton	Maximum...	7	16	24	24	24	23	24	24	26	30	30	10	13	13	-7	22	28	28	13	13	0	28	28	19	19	1	19	19	20	1	18.0	
	Minimum...	-17	-4	11	5	19	15	-1	12	11	6	6	-10	-10	8	-26	-9	5	0	-5	-2	-16	-10	13	-8	-14	-23	-2	-1	15	-7	-16	-2.4
Williston	Maximum...	22	21	30	37	33	19	34	32	30	37	17	12	32	29	28	30	35	27	28	8	19	40	30	30	19</							

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James Red.						.01					T.			T.					T.				T.			.04			.04			.06		0.15
Casselton	Sheyenne						.02					T.			T.					T.		.02			.04				.05			.04		0.23	
Cooperstown	James						.02					T.			T.					T.		T.							.08			.07		0.29	
Courtenay	Devils Lake	.01	T.	T.		.03	.05					T.			T.					T.		T.		.03					T.		.03		T.	0.09	
Devils Lake ^{1 5}	James						.03					T.			T.					T.		T.			.02				.04	.01	T.	.02	T.	0.29	
Edgeley	James						.03					T.			T.					T.		T.			.02				.04	T.	T.	.03	T.	0.11	
Edmore	Devils Lake	T.				.07	T.					T.			T.					T.				T.	.06				.07	T.	.04	T.	.06	0.34	
Elleudale	James				.02		.01								T.									T.	.05				T.				.06	0.16	
Fargo ^{1 5}	Red.	T.	.02		T.	T.	.01	T.		T.		T.	T.		.05	.07				T.	.03	T.		T.	.03	.03	.03		.04	T.		.04	T.	0.32	
Formau	Sheyenne																								.03				T.		T.		T.	0.07	
Fullerton	James				.01		.02					T.								T.	T.	T.			.02		.03		T.			.02	T.	0.10	
Gackle	do																																		
Grafton	Red.						T.								T.	.10								T.	T.	.26		T.	.20		.10	.02	.11	.02	0.82
Grand Forks Airport ³	do	.02	.01	.02			T.	.04						T.	.06	.03				.09	.06				T.	.02	.14	T.	.08	T.	.02	.12	T.	0.60	
Hankinson ²	do							.02																								.09	.02	0.42	
Hannah	Pembina															.07		.05								T.	.14				.01		.10	T.	0.12
Hillsboro	Red.	T.	T.		T.	T.									.08	T.				.02	T.	.04							.14	.06	T.	.20	.04	0.58	
Jamestown Airport ³	James	T.	.02				.09					.03	T.		.01					T.	T.			.09	.05				.03	T.	.03	.20	.02	0.57	
Langdon	Pembina		T.	.02	.06		.02					.02			.05	.07					.05	.04					.14		.02	.05	.04	.08	.03	T.	0.09
Larimore	Red.	T.					T.								T.									T.											
Lisbon	Sheyenne	T.			T.		.03								.04						T.	T.												0.08	
Mayville	Red.	.01	.01	T.			T.					T.			.01	.08				T.															

*Included in the next measurement.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

[WBO, Minneapolis, 3-28-46-1050]

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1.55²

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LV BISMARCK, N. D., FEBRUARY 1946 No. 2

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GENERAL SUMMARY

The outstanding feature of the weather during the month was the severe blizzard in the Red River Valley on February 5-6. The wind at Grand Forks, Fargo, Jamestown, and Ashley reached velocities of about 50 miles per hour, with higher gusts. Highways and railroads were blocked by blowing snow in the northern and eastern counties, and in the Red River Valley the falling and drifting snow was piled into huge drifts. In Fargo, drifts were 3 to 4 feet deep, with an occasional 8-foot drift. It was the heaviest 24 hour snowfall in Fargo since records began. Traffic was at a standstill in Fargo for nearly 24 hours and was limited for several days. Some smaller communities were snowbound for 2 to 3 weeks, with emergency airplane service at a few places. Freezing rain formed a glaze over sidewalks and highways and interfered with travel in the western part of the state on the 25th. Temperatures in the western part of the state averaged considerably higher than in the eastern part. The precipitation averaged above normal due to heavy snow in the eastern and some northern counties, but there was little precipitation in the southwestern counties. Livestock were mostly in good condition. The heavy snowfall in the eastern part of the state interfered with marketing of grain and livestock.

TEMPERATURE

The mean temperature for the state was 10.4°, or 0.5° above the 1892-1946 average for February. The mean temperature for the eastern division was 6.4°; for the middle division, 8.8°; and for the western division, 16.0°. The highest mean temperature was 25.2° at Bowman and Marmarth, and the lowest, 1.0° at Hannah and Pembina, making a range in mean temperature of 24.2°. The absolute range was 100°, from 60° at Marmarth on the 24th, to -40° at Willow City on the 2d. The average daily excess in temperature for the state since January 1, 1946, is 2.4°.

PRECIPITATION

The average precipitation for the state was 0.66 inch, or 0.20 inch more than the 1892-1946 average for February. In the eastern division the average amount was 0.87 inch; in the middle division, 0.67 inch; and in the western division, 0.44 inch. The greatest monthly amount reported was 2.02 inches at Oakes; the least was 0.05 inch at Bowman, Fairfield, and Golva. The greatest amount recorded in any 24 consecutive hours was 1.22 inches at Fargo on the 5-6th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 0.07 inch. The average snowfall was 8.1 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.40	2	29.33	28	11.3	40	nw.	15	85	85	76	82	64	1470
Devils Lake...	30.48	2	29.27	28	10.3	31	nw.	6	79	78	76	83	59	1698
Fargo.....	30.52	2	29.34	28	14.9	48	n.	5	88	90	81	84	59	1635
Williston.....	30.31	19	29.21	28	7.1	29	w.	28	85	86	76	80	45	1434

† And other dates.

COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	10.0	62	-45	0.59	0.77	0.37	0.58	4.9	4	14	7	8	
1893...	-0.3	52	-41	1.01	0.51	0.22	0.58	5.7	4	12	7	9	
1894...	8.0	55	-54	0.28	0.23	0.16	0.22	2.3	2	14	9	5	
1895...	5.9	65	-40	0.33	0.41	0.33	0.36	3.6	4	13	7	8	
1896...	14.3	64	-50	0.56	0.29	0.38	0.41	4.3	3	12	9	8	
1897...	6.1	52	-29	1.14	1.05	1.30	1.16	11.5	7	12	7	9	
1898...	13.3	65	-40	0.46	0.46	0.46	0.46	4.5	3	13	8	7	
1899...	0.4	60	-34	0.22	0.16	0.22	0.20	1.9	3	14	8	6	
1900...	1.3	46	-48	0.20	0.55	0.66	0.47	4.5	4	12	9	7	
1901...	7.1	60	-48	0.32	0.30	0.31	0.31	2.9	3	15	7	6	
1902...	12.1	51	-31	0.73	1.10	1.12	0.98	6.7	6	10	6	12	
1903...	3.1	46	-33	0.48	0.25	0.41	0.38	3.7	3	19	4	5	
1904...	-2.1	52	-49	0.81	0.56	0.69	0.69	7.6	5	13	6	10	
1905...	8.2	64	-42	0.25	0.31	0.37	0.31	2.9	2	19	4	5	
1906...	9.8	57	-46	0.20	0.07	0.28	0.18	1.4	2	13	8	7	
1907...	10.7	58	-38	0.36	0.21	0.42	0.33	2.8	3	15	7	6	
1908...	13.8	62	-49	1.56	0.68	0.87	1.04	10.1	5	12	7	10	
1909...	9.6	56	-34	0.28	0.36	0.37	0.34	3.7	4	11	7	10	
1910...	3.4	56	-34	0.57	0.40	0.81	0.59	5.6	4	14	7	7	
1911...	7.3	55	-50	0.84	0.74	0.52	0.70	8.0	3	15	8	5	
1912...	11.8	48	-38	0.19	0.18	0.09	0.15	1.7	2	10	9	10	
1913...	8.5	64	-33	0.08	0.09	0.09	0.09	1.0	2	12	9	7	
1914...	1.0	57	-44	0.34	0.28	0.40	0.34	3.8	3	12	8	8	
1915...	17.4	50	-47	1.32	0.27	0.26	0.62	6.1	3	9	5	14	
1916...	6.4	55	-20	0.41	0.45	0.58	0.48	4.8	4	14	8	7	
1917...	-0.7	61	-39	0.84	0.58	0.55	0.66	7.1	5	10	8	10	
1918...	10.8	60	-48	0.20	0.16	0.29	0.22	2.3	3	13	9	6	
1919...	7.7	58	-41	0.68	0.73	0.44	0.62	6.5	5	10	8	10	
1920...	12.5	53	-40	0.38	0.25	0.28	0.30	3.2	3	11	9	9	
1921...	19.9	64	-36	0.52	0.39	0.25	0.39	3.8	3	11	10	9	
1922...	0.7	45	-33	1.41	1.17	1.00	1.19	12.8	5	13	6	9	
1923...	4.1	48	-39	0.78	0.64	0.51	0.64	7.2	4	13	7	8	
1924...	20.3	67	-40	0.39	0.43	0.35	0.39	4.2	3	14	6	9	
1925...	16.5	62	-27	0.48	0.30	0.08	0.29	3.6	3	10	6	9	
1926...	22.3	58	-39	0.47	0.44	0.31	0.41	3.7	4	9	12	10	
1927...	13.3	50	-19	0.49	0.31	0.27	0.36	3.1	4	12	7	9	
1928...	18.8	59	-31	0.13	0.06	0.15	0.11	1.2	2	14	8	8	
1929...	2.8	44	-19	0.30	0.28	0.30	0.29	3.3	4	12	8	8	
1930...	21.7	63	-44	1.41	1.15	0.97	1.18	11.7	6	11	8	9	
1931...	28.0	62	-30	0.34	0.20	0.31	0.28	2.9	2	14	6	8	
1932...	13.6	69	-31	0.30	0.37	0.30	0.32	4.3	3	12	9	8	
1933...	7.9	58	-45	0.25	0.26	0.34	0.28	3.3	3	13	8	7	
1934...	19.5	61	-30	0.08	0.04	0.07	0.06	0.7	1	13	8	7	
1935...	24.0	63	-25	0.21	0.24	0.15	0.20	1.9	2	13	7	8	
1936...	-12.9	43	-60	0.90	0.70	0.50	0.70	9.1	6	12	8	9	
1937...	6.8	55	-35	0.83	0.40	0.25	0.49	6.6	4	12	9	7	
1938...	7.2	60	-35	0.71	0.63	0.71	0.68	8.6	5	11	7	10	
1939...	-0.8	51	-46	0.85	0.60	0.45	0.63	9.7	5	13	8	7	
1940...	15.0	52	-29	0.63	0.59	0.60	0.61	7.8	7	5	8	16	
1941...	12.2	57	-40	0.23	0.18	0.24	0.22	2.8	3	12	8	8	
1942...	14.1	57	-30	0.19	0.30	0.53	0.36	4.6	5	6	9	13	
1943...	15.1	62	-32	0.75	0.42	0.33	0.50	6.4	5	11	9	8	
1944...	11.2	50	-43	0.19	0.34	0.34	0.29	4.3	4	13	7	9	
1945...	15.1	52	-29	0.62	0.23	0.23	0.36	4.6	4	12	8	8	
1946...	10.4	60	-40	0.87	0.67	0.44	0.66	8.1	6	10	9	9	
Period	9.9	69	-60	0.54	0.43	0.42	0.46	5.0	4	12	8	8	

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Climatological Data for February 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer																		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear			Pt. cloudy	Cloudy																
Eastern Division																																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	5.7	.....	46	28	-31	2	0.42	.....	0.20	6	5.8	6	17	9	2	nw.	Albert Thoren.														
Carrington	Foster	1,579	49	6.1	-2.8	48	15	-29	2	1.30	+0.82	0.60	5-6	17.0	5	13	7	8	.....	Soo Line Agent.															
Casselton	Cass	934	51	8.2	-0.9	44	28	-28	2	1.30	+0.71	.....	.....	16.2	.....	9	13	6	n.	C. Hayford.													
Cavalier	Pembina	894	39	2.5	.....	33	21	-28	2	0.12	-0.39	0.08	7	2.0	2	6	18	4	n.	City Light & Power Co.															
Colgate	Steele	1,180	13	.....	.....	.....	.....	.....	.....	0.56	+0.07	0.34	5	7.5	7	13	9	6	ne.	O. M. Jensen.										
Cooperstown	Griggs	1,428	50	5.6	-2.2	39	28	-36	2	0.61	+0.09	0.49	5-6	8.0	2	15	3	10	nw.	R. J. Lockner.																
Courtenay	Stutsman	1,523	16	.....	.....	.....	.....	.....	.....	0.39	-0.19	0.25	26	5.2	5	3	22	3	nw.	G. H. Hanawalt.										
Devils Lake	Ramsey	1,478	71	4.4	-0.7	41	28	-29	2	0.44	-0.06	0.13	25-26	6.5	10	10	5	13	nw.	U. S. Weather Bureau.																
Edgeley, 2 miles S.	LaMoure	1,566	46	9.2	-3.6	40	28	-27	13	1.18	+0.70	0.46	5-6	13.6	5	12	6	10	nw.	N. Dak. Agri. Exp. Sta.																
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	1.4	-3.4	40	28	-39	2	0.28	-0.13	0.09	8	4.2	5	16	4	8	nw.	Mike Davis.																
Ellendale	Dickey	1,457	48	10.8	-2.3	44	28	-24	13	1.79	+1.30	0.87	5-6	18.5	6	11	6	11	nw.	J. E. Demmer.																
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	6.6	-1.5	38	28	-27	2	1.44	+0.75	1.22	5-6	13.0	10	8	7	13	n.	U. S. Weather Bureau.																
Forman	Sargent	1,249	55	10.6	+0.7	41	28	-27	2	1.63	+1.13	0.95	5-6	20.3	7	12	3	13	nw.	Helge Dyste.																
Fullerton	Dickey	1,439	49	12.0	-0.4	43	28	-25	13	1.85	+1.14	0.76	5-6	22.8	7	11	7	10	nw.	F. O. Alin.																
Gackle	Logan	1,951	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grafton	Walsh	827	55	5.2	-2.1	38	28	-28	2	0.37	-0.20	0.13	8	3.7	5	12	7	9	nw.	Mrs. Walter Kranzler.																
Grand Forks, 2 miles W.	Grand Forks	830	56	4.0	-3.7	37	28	-29	2	0.73	+0.17	0.29	5-6	9.0	9	10	7	11	n.	Dr. J. C. Lamont.																
Grand Forks Airt. 2 1/2 mi. W	Grand Forks	834	6	3.9	.....	36	28	-31	2	0.45	.....	0.30	5-6	5.7	10	8	5	15	nw.	University of N. Dak.														
Hankinson	Richland	1,068	18	9.4	-4.7	47	28	-25	2	1.19	+0.65	0.60	26	14.8	6	9	7	12	nw.	Soo Line Agent.																
Hannah	Cavalier	1,568	53	1.0	-1.6	31	18	-33	2	0.45	-0.14	0.25	6	5.8	4	6	14	8	nw.	A. E. Prior.																
Hillsboro	Trall	901	41	7.4	-2.8	39	28	-28	2	1.17	+0.62	0.95	5-6	14.1	6	7	10	11	n.	Alfred Jahnke.																
Jamestown, 2 miles SE	Stutsman	1,457	55	8.6	-1.3	42	28	-29	2	0.54	-0.05	0.28	25-26	9.0	5	17	5	6	nw.	N. Dak. State Hospital.																
Jamestown Airt. 2 mi. NE	Stutsman	1,494	6	7.6	.....	40	28	-28	2	0.63	.....	0.22	5-6	7.5	10	11	7	10	nw.	U. S. Airway Comm. Sta.														
Kensal, 7 miles SW	Stutsman	1,440	6	6.9	.....	42	15	-31	2	0.59	.....	0.25	26	7.4	6	13	7	8	nw.	U. S. Wildlife Refuge.														
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	2.1	-2.7	33	28	-35	2	0.50	-0.13	0.12	25	5.0	11	9	13	6	nw.	V. Sturlaugson.																
Larimore	Grand Forks	1,134	54	3.2	-4.5	46	28	-29	2	0.77	+0.22	0.55	5-6	9.7	2	7	10	11	nw.	Jesse P. Phillips.																
Lisbon	Ransom	1,091	43	10.4	-1.2	41	28	-28	2	1.77	+1.18	0.75	6	21.0	6	10	3	15	nw.	J. O. Halverson.																
Mayville	Trall	975	51	7.4	-2.4	41	28	-29	2	0.80	+0.36	0.68	5-6	10.2	6	6	11	11	n.	H. A. Ragaz.																
McHenry, 3 miles NE	Eddy	1,509	24	4.9	-0.5	37	28	-33	2	0.44	-0.01	0.10	5	5.0	8	12	8	8	n.	C. E. Blasky.																
McLeod, 3 miles E.	Richland	1,075	35	10.0	-3.0	40	21	-30	2	1.05	+0.49	0.80	5-6	15.5	4	14	6	8	n.	J. G. Carlson.																
McVile	Nelson	1,467	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milnor	Sargent	1,117	14	8.0	.....	37	28	-30	2	1.04	+0.51	0.45	23	17.0	4	12	12	4	sw.	A. M. Casad.															
Oakes	Dickey	1,318	18	8.6	-4.3	40	15	-25	2	2.02	+1.56	0.90	5-6	24.8	6	8	11	9	nw.	E. W. Wilson.																
Park River	Walsh	998	43	1.4	-3.3	32	28	-31	2	0.19	-0.23	0.10	6	3.0	3	14	5	9	nw.	H. M. Blazer.																
Pembina Airport, 1 mile S.	Pembina	795	73	1.0	-1.8	30	21	-32	2	0.22	-0.40	0.17	7	3.3	5	5	18	nw.	Martin Severson.																	
Petersburg	Nelson	1,524	16	4.1	.....	40	28	-32	2	0.24	-0.26	0.14	6	3.2	2	16	8	4	nw.	U. S. Airway Comm. Sta.															
Sharon	Steele	1,516	23	6.0	-3.5	39	28	-29	2	0.54	+0.06	0.31	5-6	5.9	7	5	12	11	n.	T. C. Overland.																
Valley City	Barnes	1,229	42	10.6	-0.9	44	28	-27	2	1.28	+0.69	0.85	5-6	14.5	8	16	3	9	se.	Nels O. Grefsheim.																
Wahpeton	Richland	962	55	8.3	-4.1	38	28	-29	2	1.47	+1.00	1.00	5-6	19.5	6	11	8	9	nw.	Hettie Blythe.																
Average for Eastern Division																				6.4	-2.6	48	16	-39	2	0.87	+0.33	1.22	5-6	10.8	6	11	8	9	nw.
Middle Division																																				
Ashley, 1 mile SE	McIntosh	2,025	51	9.8	-1.6	40	28	-24	12	1.40	+0.95	0.80	5-6	12.0	10	10	5	13	nw.	U. S. Airway Comm. Sta.																
Belcourt	Rolette	1,900	2	4.0	.....	36	28	-32	2	0.42	.....	0.13	7	4.6	5	6	16	6	nw.	Turtle Mt. Indian Agcy.														
Bisbee	Towner	1,601	44	4.8	-1.7	38	28	-29	2	1.20	+0.84	0.37	25-26	13.8	9	15	5	8	s.	Robert L. Peterson.																
Bismarck	Burleigh	1,670	72	13.7	+2.1	46	18	-15	2	0.42	+0.03	0.27	25-26	3.3	4	7	6	15	nw.	U. S. Weather Bureau.																
Bismarck Airt. 2 1/2 mi. SE	Burleigh	1,650	7	12.4	+3.9	43	15	-21	2	0.38	-0.06	0.22	25-26	3.7	6	7	6	15	nw.	U. S. Weather Bureau.																
Bottineau	Bottineau	1,638	55	5.2	+0.3	36	18	-30	2	0.67	+0.31	0.40	25-26	7.4	8	8	6	14	nw.	N. D. School of Forestry.																
Butte, 3 miles WSW	McLean	1,880	22	10.0	-3.1	41	15	-28	2	0.81	+0.28	0.41	25-26	12.6	6	13	6	9	nw.	R. L. Williams.																
Carson, 2 1/2 miles SW	Grant	2,500	35	15.6	+1.1	42	15	-27	12	0.44	-0.04	0.15	10	5.0	5	5	18	5	nw.	J. W. Evens.																
Center	Oliver	2,100	9	11.6	.....	42	15	-27	12	0.76	.....	0.25	25	8.1	5	10	12	6	nw.	Fred L. Heinz.														
Drake	McHenry	1,634	17	6.6	-3.8	40	15	-30	2	0.63	+0.16	0.41	25-26	10.1	5	18	10	0	nw.	Geo. A. Paulus.																
Dunseith, 2 miles NNE	Rolette	1,682	51	5.1	-1.6	35	28	-26	2	0.43	+0.01	0.27	26	5.2	2	7	11	10	se.	State Tuberculosis San.																
Eckman	Bottineau	1,500	41	4.2	-3.3	39	15	-38	2	0.83	+0.46	0.30	25	10.4	6	10	4	14	nw.	E. R. Sherman.																
Fessenden	Wells	1,610	35	7.6	-2.1	40	15	-31	2	0.72	+0.20	0.30	11	9.2	7	10	9	9	n.	John V. Zuber.																
Fort Yates	Sioux	1,670	47	17.2	+4.6	48	28	-20	12	0.45	-0.01	0.30	25	3.0	3	19	3	6	nw.	P. J. Jacobson.																
Foxholm, 6 1/2 miles NE	Ward	1,657	26	8.6	-3.4	40	15	-35	2	0.37	-0.10	0.11	25-26	11.2	7	8	5	15	nw.	U. S. Wildlife Refuge.																
Garrison	McLean	1,911	70	11.0	-0.1	43	15	-35	2	1.02	+0.51	0.50	25-26	14.1	5	8	12	nw.	Mae H. Vorachek.																	
Granville	McHenry	1,504	40	7.8	-2.2	44	15	-33	2	0.56	+0.13	0.15	7	8.0	5	22	2	4	nw.	Fred Roble.																
Hansboro	Towner	1,597	39	1.8	-4.3	35	28	-31	2	0.50	0.00	0.15	25	8.5	4	11	11	6	nw.	W. E. Disher.																
Harvey, 3 miles SE	Wells	1,596	44	.....	.....	.....	.....	.....	.....	0.37	-0.08	0.17	28	4.6	5	9	9	10	se.	H. J. Reynolds.										
Leeds	Benson	1,515	6	5.1	.....	38	28	-35	2	0.49	.....	0.16	5	5.6	8	9	13	6	w.	John Dulmage.														
Linton	Emmons	1,711	30	15.0	+1.2	50	15	-20	2	0.81	+0.39	0.23	25	8.1	7	10	5	13	nw.	Wm. Heyerman.																
Maddock, 1 mile E	Benson	1,604	32	5.0	-5.2	39	28	-36	2	0.61	+0.21	0.21	26	7.6	5	9	13	6	nw.																	

Climatological Data for February 1946-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	54	13.8	+1.7	50	15	-27	12	0.80	+0.41	0.52	25	7.0	6	12	12	4	nw.	H. W. Case.
Epping	Williams	2,224	38	12.4	+3.0	40	22	-23	12	0.38	-0.02	0.16	17	7.0	3	20	4	4	sw.	T. Beachler.
Fairfield, 94 miles N.	Billings	2,650	18							0.05	-0.37	0.05	9	0.5	1	17	6	5	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	29	21.6		52	24	-20	12	0.45	0.00	0.12	6-7	3.2	7	10	12	6	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	6	21.2	+5.2	57	24	-24	12	0.05	-0.35	0.03	7	0.4	2	8	16	4	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	38	13.8	+4.8	40	15	-23	12	0.22	-0.34	0.12	26	3.0	4	13	13	2	se.	L. D. Nielson.
Halliday	Dunn	2,073	5							0.36		0.19	25	5.0	4	14	11	3	nw.	John Kisse.
Hettinger	Adams	2,675	40	24.1	+7.6	56	24	-23	12	0.09	-0.34	0.05	11	2.8	2	12	14	2	nw.	Edgar Martin.
Kenmare	Ward	1,799	15	7.8	-0.4	40	15†	-30	2	0.85	+0.46	0.47	25	12.9	7	10	11	7	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	38	25.2	+8.0	60	24	-13	8	0.30	-0.11	0.25	7	2.9	4	13	8	7	nw.	S. P. Grane.
Medora, 14 mi. W.	Billings	2,271	32	22.5		57	24	-24	12	0.52	+0.13	0.20	25	4.2	5	19	5	4	w.	Harry Roberts.
Mott	Hettinger	2,424	40	20.6	+6.5	56	24	-25	12	0.20	-0.28	0.10	11†	2.9	2	8	18	2	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	55	22.4	+7.9	58	24	-24	12	0.39	-0.10	0.17	26	5.9	6	7	16	5	nw.	F. S. Sleight.
New Hradec, 1 mile E.	Dunn		5	19.3		52	24	-27	12	0.30		0.09	11-12	1.9	9	13	9	6	w.	Peter F. Ficek.
Parshall	Mountrail	1,929	32	9.8	+1.1	40	15	-30	12	0.47	+0.08	0.16	25	7.3	7	3	22	3	se.	C. E. Shubert.
Portal	Burke	1,954	33	6.3	+0.1	39	24	-32	2	0.88	+0.50	0.55	25-26	10.9	5	9	13	6	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	42	7.9	-3.9	40	18	-27	1	1.25	+0.80	0.32	27-28	14.7	6	6	15	7	nw.	E. J. Lewis.
Richardton, 14 miles N.	Stark	2,467	31	18.7	+4.0	51	24†	-18	12	0.19	-0.22	0.12	19	2.5	3	7	10	11	se.	Assumption Abbey.
Ryder	Ward	2,108	18																	S. C. Schellenbaum.
Sanish	Mountrail	1,835	21	9.3	+0.7	44	23	-32	12	0.31	-0.14	0.16	25	4.3	5	12	12	4	w.	H. J. Bugge.
Stanley	Mountrail	2,258	9	6.8		39	15	-29	2	1.07		0.26	25	19.5	8	6	12	10	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	18							0.49	+0.07	0.18	26†	6.6	8	12	13	3	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	18							0.57	+0.20	0.20	25	7.6	4	6	4	18	nw.	L. A. Simon.
Trotters	Golden Valley		21							0.53	+0.15	0.17	14	4.3	6	1	23	4	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	6	10.9		44	15	-28	12	0.48		0.24	25-26	5.1	6	8	16	4	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	34	14.9	+1.2	44	15	-23	12	0.89	+0.46	0.32	25	8.5	8	6	19	3		J. C. Zeller.
Wildrose	Williams	2,258	17							0.32	-0.14			5.0		15	3	10	sw.	Jonathan Winkler.
Williston	Williams	1,878	68	13.8	+5.7	43	24	-22	12	0.52	+0.11	0.32	25-26	2.4	6	4	8	16	w.	U. S. Weather Bureau.
Average for Western Division				16.0	+3.8	60	24	-32	2†	0.44	+0.02	0.45	25-26	5.2	5	10	11	7	nw.	
Average for the State				10.4	+0.5	60	24	-40	2	0.66	+0.20	1.22	5-6	8.1	6	10	9	9	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for February 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	12	1	17	30	8	8	16	11	18	27	0	2	15	16	39	30	20	35	30	30	38	29	36	29	28	15	24	40				21.6	
	Minimum	-16	-23	-4	5	1	-7	-7	-9	-12	-1	-10	-24	-11	-12	1	10	2	14	0	-5	11	16	17	15	14	-18	-18	19				-1.9	
Bismarck Airport	Maximum	12	7	16	20	9	14	16	17	28	28	5	1	25	19	43	33	21	43	30	36	40	33	40	37	29	15	25	41				24.4	
	Minimum	-13	-21	0	5	2	-7	-3	-10	-11	-2	-16	-20	-14	-7	4	12	5	15	9	1	16	15	26	23	15	-16	-18	25				0.5	
Bottineau	Maximum	-1	10	2	21	17	8	9	10	12	22	3	-3	15	14	23	24	23	36	34	24	24	23	29	26	15	13	8	31				15.9	
	Minimum	-25	-30	-10	2	5	5	6	-18	-6	-5	-20	-15	-20	-8	3	1	4	5	-7	5	2	5	-4	9	-1	-18	4					-5.4	
Carson	Maximum	2	6	15	27	12	12	20	30	30	20	8	5	25	22	42	36	35	40	32	35	42	40	42	40	20	32	35	40				26.6	
	Minimum	-18	-15	0	6	2	4	8	0	10	0	-11	-27	-5	-5	3	15	10	14	18	12	18	25	22	18	4	-5	-7	20				4.5	
Crosby	Maximum	-10	1	13	7	2	18	15	12	29	0	-5	8	22	26	39	30	25	35	26	32	31	33	32	40	16	10	34	34				19.8	
	Minimum	-25	-26	-13	-9	-7	-20	-19	-11	-4	-1	-12	-16	-14	-10	10	13	7	7	16	-2	5	4	10	18	14	2	-5	3				-3.8	
Devils Lake	Maximum	-9	10	9	22	13	4	10	2	15	24	-4	-4	13	0	34	20	14	36	22	26	27	16	28	13	14	7	17	41				14.3	
	Minimum	-24	-29	-10	8	4	-6	-9	-12	-15	-9	-16	-16	-15	-19	-2	1	0	0	-1	-2	14	5	7	-4	7	-5	-9	6				-5.4	
Dickinson Airport	Maximum	16	18	26	17	14	33	24	21	37	27	6	14	25	32	44	34	39	43	32	38	43	45	44	54	37	20	42	41				30.9	
	Minimum	-10	-10	2	6	1	-4	1	-4	8	-1	-11	-24	-1	3	23	13	13	26	17	14	28	24	27	29	21	6	8	30				8.5	
Dunn Center	Maximum	20	10	20	18	12	20	22	22	36	32	6	5	27	20	45	38	33	43	32	38	41	41	44	48	40	18	33	39				28.7	
	Minimum	-14	-18	-2	3	2	-10	-7	-6	0	5	-13	-25	-3	-2	5	15	13	20	18	9	24	18	27	21	16	4	-2	25				4.9	
Fargo Airport	Maximum	-5	4	15	34	29	8	20	11	7	26	0	0	14	7	36	24	14	34	28	25	33	23	28	20	26	18	14	38				18.7	
	Minimum	-22	-27	6	15	8	-13	-15	-13	-19	-2	-13	-19	-21	-17	-9	1	-4	-6	-4	-12	22	13	10	-6	18	-4	-11	8				-5.3	
Fessenden	Maximum	-6	5	9	19	10	7	10	10	21	25	3	1	19	15	40	38	22	39	35	35	32	25	32	29	21	13	20	39				19.9	
	Minimum	-24	-31	-13	1	3	-10	-9	-14	-15	0	-14	-21	-15	-18	-6	9	2	4	9	0	15	1	15	5	11	-2	-13	0				-4.6	
Fullerton	Maximum	8	-1	15	32	30	8	20	15	17	28	15	0	17	17	40	29	27	38	35	33	38	34	37	32	29	22	18	43				24.1	
	Minimum	-11	-24	-7	4	8	-1	-9	-7	-9	5	-7	-16	-25	-10	-6	20	2	4	5	16	-3	12	14	20	9	20	5	-14	3				-0.2
Garrison	Maximum	-4	0	13	16	8	14	16	13	30	30	3	0	24	15	43	32	19	42	26	35	35	29	38	38	26	13	21	41				22.0	
	Minimum	-19	-23	-4	0	-2	-8	-1	-9	-9	-5	-17	-20	-8	-9	7	14	7	15	14	4	16	12	23	21	11	-9	-12	7				-0.1	
Golva	Maximum	18	30	34	17	18	36	34	25	36	27	14	20	27	36	50	35	44	45	34	42	46	47	48	57	48	21	50	44				35.1	
	Minimum	-8	-9	0	5	-3	-4	2	-1	8	-4	-10	-24	-2	8	23	15	12	22	10	7	23	22	21	19	17	10	10	28				7.2	
Grafton	Maximum	-2	5	8	27	28	10	9	11	4	22	11	-1	12	9	13	18	18	26	32	19	31	27	29	19	19	20	17	38				16.8	
	Minimum	-13	-28	-21	7	8	-1	-13	-7	-24	0	-14	-13	-23	-15	-16	0	-1	-7	11	-13	8	8	9	-8	6	-2	-13	-3				-6.4	
Grand Forks Airport	Maximum	-8	-9	15	31	25	9	12	11	8	26	-4	-3	14	-5	34	17	10	33	26	21	31	17	28	14	18	14	16	36				15.6	
	Minimum	-25	-31	-13	15	6	-11	-14	-14	-21	-6	-17	-18	-20	-17	-8	-2	-5	-3	-8	-13	12	10	-2	-10	-5	-12	1					-7.9	
Jamestown Airport	Maximum	-5	6	10	28	12	7	13	9	15	26	0	0	17	15	39	29	18	39	30	30	33	23	36	23	21	13	18	40				19.7	
	Minimum	-23	-28	-7	5	4	-7	-11	-8	-16	-2	-10	-20	-13	-14	-1	14	0	1	-1	-4	10	7	19	3	13	-13	-18	11				-3.1	
Kenmare	Maximum	-8	-3	9	13	5	13	15	11	29	7	5	10	21	31	40	30	24	38	24	37	31	31	38	40	14	12	32	37				20.2	
	Minimum	-23	-30	-29	-7	6	-12	-12	-10	-12	1	-15	-25	-24	-13	-13	16	1	4	18	9	14	5	6	17	10	0	-11	1				-5.3	
Langdon	Maximum	-5	7	3	20	20	10	9	8	10	24	3	0	7	-2	10	20	12	30	27	18	32	20	25	14	12	13	20	33				18.5	
	Minimum	-23	-35	-20	-2	4	-7	-13	-17	-22	3	-23	-29	-30	-15	-17	-5	-6	-5	7	-12	11	-5	7	-13	4	-4	-4	2				-9.9	
Marmarth	Maximum	33	33	42	22	23	38	28	27	38	32	16	29	30	29	48	40	49	44	37	42	49	49	50	60	49	36	49	48				37.2	
	Minimum	0	-5	0	10	3	-5	10	-13	-5	12	5	12	5	3	15	9	17	15	20	25	23	14	24	27	25	25	15	23	38				19.9
Minot Airport	Maximum	-8	5	10	11	6	13	16	8	31	31	-3	-2	19	11	40	27	20	37	22	35	30	29	33	34	20	10	20	38				19.9	
	Minimum	-25	-27	-6	-3	-5	-12	-5	-9	-7	-10	-18	-21	-4	-13	11	17	5	12	11	10	18	3	18	16	8	-8	-1	18				12.1	
Mott	Maximum	26	18	28	26	20	26	24	26	39	35	16	12	28	26	47	40	38	45	40	38	44	47	48	56	50	28	44	43				34.6	
	Minimum	-7	-14	-10	-4	4	-2	-3	-6	2	10	-2	-25	-5	3	8	14	12	22	20	10	26	24	23	27	18	8	6	33				6.6	
Pembina Airport	Maximum	-10	-9	12	27	21	4	11	10	16	6	22	-4	-3	11	1	11	11	6	28	23	18	30	13	25	8	18	4	20	29				12.1
	Minimum	-24	-29	-19	12	-4	-10	-13	-10	-24	-13	-21	-16	-21	-22	-10	-3	-11	-4	-6	-16	9	2	-5	-14	5	-8	-10	1				-10.3	
Sharon	Maximum	-6	-8	8	25	6	6	3	10	-13	-19	7	27	10	5	13	10	35	15	32	33	27	31	27	30	18	20	13	20	39				17.4
	Minimum	-18	-29	-19	6	6	-3	-10	-13	-19	7	-16	-15	-21	-15	-14	2	-3	-5	0	-11	13	8	12	-5	6	-1	-14	4				-5.5	
Steele	Maximum	-6	0	14	22	14	12	15	12	24	25	9	0	20	15	41	38	25	39	35	32	36	31	35	30	26	16	20	39				22.0	
	Minimum	-17	-26	-5	10	4	-4	-4	-6	-10	-12	9	-15	-16	-18	-11	3	15	3	7	15	0	15	12	17	17	5	-2	-17	8				-0.9
Valley City	Maximum	0	-4	9	29	29	9	12	13	13	28	23	3	20	19	29	37	23	35	34	31	37	32	33	30	20	17	20	44				22.1	
	Minimum	-13	-27	-11	7	9	0	-11	-7	-18	-4	-10	-11	-20	-9	-10	12	2	1	16	5	14	11	17	-1	14	5	-12	6				-1.2	
Wahpeton	Maximum	-2	5	12	33	33	8	18	18	11	22	3	6	6	6	22	22	17	35	35	23	23	37	30	23	23	15	38					19.3	
	Minimum	-10	-29	-11	9	4	4	-11	-8	-18	13	-11	-10	-24	-12	-17	3	-1	-1	16	-8	8	18	12	-5	14	6	-15	1				-3.9	
Williston	Maximum	-4	10	16	11	9	19	19	16	33	27	0	4	20	18	43	32	28	37	26	39	36	40	39	43	35	15	33	37				24.4	
	Minimum	-13	-13	5	-3	-4	-12	-3	-7	-2	-10	-13	-22	2	-2	12	12	15	8	20	13	7	20	17	22	22	13	-3	3	26				13.8

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James	.15				T.	.60						.20						.03				T				.32						1.80
Casselton	Red						.49		.12																	T.	.25						1.80
Cooperstown	Sheyenne						.07	.02					.01	T.						T.			T.			T.	.05						0.61
Courtenay	James	.04					.01	.10	.11			.01	.05	T.	T.					T.			T.			T.	.21	.17					0.39
Devils Lake ^{1 5}	Devils Lake	.03		T.	T.	.01	T.	.01	.01		T.	.01	.05	T.	T.				T.	.01	T.		T.			T.	.10	.07	T.	.05			0.44
Edgeley	James						.46						.26													T.	.21	.14					1.18
Edinore	Devils Lake	.02					.03	T.	.09		.09		.05							T.	T.												0.28
Ellendale	James						.48	.39					.23														.20	.41		.08			1.79
Fargo ^{1 5}	Red	.02		T.			.88	.34	.01	.02		T.	.07	.03	T.				T.	T.			T.			.01	.02	T.	T.	.04		.03	1.44
Forman	Sheyenne	T.					.45	.95		T.			.02	.11								T.					.03	.04					1.63
Fullerton	James	.02					.61	.15				T.	.33						T.			T.				T.	.50	.19		.05			1.85
Gackle	do																																
Grafton	Red	.03					.08		.13				.05								T.		T.				.08						0.37
Grand Forks Airport ³	do	.02			T.		.18	.12	.01	T.		T.	.01	.01	T.					.02		T.		T.		.03	T.			T.	.04		0.47
Hankinson ²	do	.01					.39		.01				.17														.60		.01				1.71
Hanuah	Pembina						.25		.02				.08			T.				T.							T.	.11					0.45
Hillsboro	Red	.02			T.		.95	T.	.02				.08			T.				T.	T.		T.		T.	.04	T.	.09					1.17
Jamestown Airport ³	James	.04					.20	.03	.05	.01		.01	.03	T.						T.	T.		T.		T.	.09	.15						0.63
Langdon	Pembina						.05	.10		.10		.02	.01			T.				.02				T.		T.	.12						0.50
Larimore	Red	T.					.55						T.	T.										T.		T.	.22						0.77
Lisbon	Sheyenne	T.					.35	.75		T.	.02		T.	.25											T.		.15	.20					1.77
Mayville	Red	.03			T.		.02	.68					.02		T.											.03	T.	.07					0.80
McHenry	James	.03																															

*Included in the next measurement.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

[WBO, Minneapolis, 4-25-46-1050]

51.05
JNT
55-3

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LV BISMARCK, N. D., MARCH 1946 No. 3

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GENERAL SUMMARY

This was the third consecutive month with above normal temperature and it was the second warmest March since 1892. The extreme high temperature for March was equalled or exceeded at many stations on the 27th and 28th. Temperatures were above the seasonal normal every day in the month, except in the east portion where minus departures occurred from the 4th to the 10th. No subzero temperatures were reported in the southwest and south-central counties. Moisture was unevenly distributed with only traces reported from most of Williams County, while the south-central and southwestern counties had heavy, wet snowfalls on the 15-16th and 21-22d. Over the east, thunderstorms were reported on the 29th, 30th, and 31st with some damage to farm property and loss of livestock by lightning. During the last 10 days of the month most farmers in the central and southern parts of the state were in the fields sowing wheat or preparing the seed bed. Light fog occurred at many places from the 6th to the end of the month, with heavy fogs on the 8th, 15th, 19th, 24th, 25th, and 31st. Brilliant auroral displays were observed on the 24th, 25th, 27th, and 28th. Many of the smaller rivers and creeks began breaking up early in the month, with the Missouri and Red rivers breaking up during the last week. There was considerable flooding of farm land in the Red River Valley and several families had to move out of their homes in Fargo and Grand Forks.

TEMPERATURE

The mean temperature for the state was 34.8°, or 10.8° above the 1892-1946 average for March. The mean temperature for the eastern division was 34.2°; for the middle division, 33.6°; and for the western division, 36.6°. The highest mean temperature was 41.4° at Medora, and the lowest, 27.2° at Towner, making a range in mean temperature of 14.2°. The absolute range was 108°, from 86° at Linton on the 27th and McLeod on the 28th, to -22° at Willow City on the 8th. The average daily excess in temperature for the state since January 1, 1946, is 5.2°.

PRECIPITATION

The average precipitation for the state was 0.99 inch, or 0.19 inch more than the 1892-1946 average for March. In the eastern division the average amount was 1.10 inches; in the middle division, 1.32 inches; and in the western division, 0.56 inch. The greatest monthly amount reported was 3.52 inches at Fort Yates; the least was only a trace at 3 stations in the western division. The greatest amount recorded in any 24 consecutive hours was 1.64 inches at Timmer on the 21-22d. The accumulated deficiency in precipitation for the state since January 1, 1946, is 0.12 inch. The average snowfall was 2.9 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)			Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	30.47	18	29.47	13	11.6	32	e.	29	83	86	66	64	848
Devils Lake...	30.47	18	29.48	6	9.8	32	ne.	29	85	86	72	75	1018
Fargo.....	30.48	10	29.37	6	12.7	33	s.	20	88	90	75	79	937
Williston.....	30.44	18	29.38	12	7.8	24	e.	29	76	83	64	59	844

† And other dates.

COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	24.2	66	-35	0.87	0.98	0.65	0.83	1.9	4	12	8	11	
1893...	13.9	68	-35	1.10	1.30	0.46	0.95	10.0	5	13	7	11	
1894...	24.8	69	-22	1.20	1.71	1.43	1.45	10.1	5	12	9	10	
1895...	23.2	75	-35	0.07	0.21	0.24	0.17	1.0	2	16	10	5	
1896...	15.7	70	-35	1.19	1.15	1.06	1.13	8.0	8	12	10	9	
1897...	11.9	58	-48	1.15	1.04	1.90	1.36	8.0	15	7	7	9	
1898...	21.3	79	-24	0.77	0.80	0.80	0.79	6.7	5	13	8	10	
1899...	7.5	72	-30	1.23	0.96	0.68	0.96	10.0	5	12	10	9	
1900...	20.3	77	-24	0.96	0.96	1.11	1.01	8.5	5	14	7	10	
1901...	25.3	85	-32	0.95	0.85	0.78	0.86	5.2	5	15	8	8	
1902...	27.4	65	-25	2.75	2.90	2.55	2.73	11.7	8	10	6	15	
1903...	22.1	80	-24	0.78	0.44	0.42	0.55	5.1	3	12	6	13	
1904...	18.2	64	-26	1.26	1.33	1.64	1.41	11.5	5	11	6	14	
1905...	32.5	81	-25	1.09	0.85	0.32	0.75	2.3	4	11	8	12	
1906...	18.5	67	-34	0.31	0.39	0.44	0.38	3.1	3	15	6	10	
1907...	23.1	83	-20	0.57	0.58	1.00	0.72	5.1	4	14	9	8	
1908...	21.1	68	-31	1.17	0.94	1.53	1.21	12.1	8	10	9	12	
1909...	24.0	61	-24	0.34	0.40	0.26	0.33	2.7	4	10	9	12	
1910...	41.3	90	-7	0.83	0.93	1.08	0.94	0.3	3	18	8	5	
1911...	30.6	78	-18	0.14	0.26	0.29	0.23	1.6	2	16	10	5	
1912...	15.4	65	-28	0.28	0.32	0.52	0.37	3.6	3	17	8	6	
1913...	17.2	70	-31	0.82	0.73	1.00	0.85	8.2	6	12	9	10	
1914...	25.5	76	-20	0.83	1.06	0.75	0.88	9.2	5	10	9	12	
1915...	22.9	63	-23	0.38	0.20	0.07	0.22	2.0	2	16	6	9	
1916...	20.3	69	-45	1.43	1.82	1.00	1.42	13.5	6	11	9	11	
1917...	22.2	67	-39	0.44	0.33	0.37	0.38	3.9	3	13	10	8	
1918...	35.0	82	-15	0.32	0.46	0.42	0.40	2.9	2	16	8	7	
1919...	17.8	67	-35	0.63	0.93	0.75	0.78	6.2	4	12	9	10	
1920...	22.4	67	-32	0.46	0.83	1.20	0.83	7.1	4	15	8	8	
1921...	25.2	75	-22	1.07	1.02	0.81	0.97	9.1	6	9	12	10	
1922...	25.8	60	-30	0.96	0.67	0.50	0.71	6.4	4	12	7	12	
1923...	18.3	65	-35	0.34	0.44	0.35	0.38	4.8	4	10	10	11	
1924...	25.5	58	-20	0.32	0.36	0.75	0.48	4.4	4	10	9	12	
1925...	27.4	75	-26	0.74	0.56	0.75	0.68	6.0	4	14	9	8	
1926...	25.8	83	-23	0.35	0.19	0.17	0.24	1.8	3	13	10	8	
1927...	30.4	77	-10	0.90	0.78	0.47	0.72	6.5	5	13	8	10	
1928...	28.1	85	-17	0.69	0.55	0.31	0.52	4.8	3	15	8	8	
1929...	30.5	77	-15	0.68	0.65	1.02	0.78	5.3	5	12	8	11	
1930...	26.1	62	-17	0.17	0.05	0.05	0.09	0.9	1	17	8	6	
1931...	25.7	63	-24	0.99	0.85	0.99	0.94	4.8	5	11	8	12	
1932...	18.9	64	-30	0.52	0.60	0.80	0.64	6.0	6	10	11	10	
1933...	28.5	70	-14	0.46	0.41	0.49	0.45	3.7	3	14	10	7	
1934...	26.3	74	-12	0.43	0.34	0.71	0.49	3.6	4	11	11	9	
1935...	26.3	75	-37	2.00	0.89	0.90	1.26	7.0	5	9	11	11	
1936...	25.4	61	-27	0.73	0.75	0.94	0.81	8.1	6	10	11	10	
1937...	24.8	72	-20	0.42	0.34	0.42	0.39	4.3	3	12	11	8	
1938...	33.1	72	-14	0.63	0.57	0.58	0.59	2.5	4	13	10	8	
1939...	23.3	81	-29	0.33	0.41	0.42	0.39	5.3	3	16	8	7	
1940...	23.1	64	-26	1.19	0.71	0.72	0.87	9.1	7	9	9	13	
1941...	24.5	68	-25	0.65	0.64	0.46	0.58	6.8	5	11	8	12	
1942...	30.0	66	-8	2.77	1.72	1.01	1.83	12.8	9	9	8	14	
1943...	17.0	77	-30	1.08	1.37	1.23	1.23	14.8	7	11	11	9	
1944...	16.7	53	-25	1.08	0.68	0.66	0.81	10.2	8	7	9	15	
1945...	33.3	77	-27	1.12	1.43	1.48	1.34	2.4	6	13	9	9	
1946...	34.8	86	-22	1.10	1.32	0.56	0.99	2.9	5	11	10	10	
Period	24.0	90	-48	0.84	0.80	0.77	0.80	6.1	5	12	9	10	

Climatological Data for March 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N	Grand Forks	960	3	35.0		85	27	-14	8	0.75		0.22	30	1.6	9	24	2	5	se.	Albert Thoren.
Carrington	Foster	1,579	49	34.4	+10.7	81	27	-3	8	0.54	-0.15	0.50	14-15	0.5	3	12	12	7	.....	Soo Line Agent.
Casselton	Cass	934	51	37.0	+12.3	81	27	-5	8	0.86	+0.10	0.32	31	1.0	7	11	7	13	s.	C. Hayford.
Cavalier	Pembina	894	39	30.0		78	27	-10	8	0.63	-0.13	0.30	30	T.	3	14	14	3	s.	City Light & Power Co.
Colgate	Steele	1,180	13							1.31	+0.51	0.68	30	1.0	4	18	6	7	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	34.9	+10.6	80	27	-9	8	0.83	+0.12	0.35	16	0.7	4	11	6	14	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	16							0.73	-0.11	0.40	16	T.	4	2	18	11	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	71	32.2	+12.4	79	27	-7	8	1.32	+0.54	0.56	16-17	0.2	6	4	13	14	s.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	36.8	+9.5	81	27	-2	8	2.11	+1.28	1.21	21-22	1.8	9	5	18	8	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	30.2	+9.1	71	27	-16	8	1.20	+0.51	0.83	15-16	2.3	5	21	2	8	s.	Mike Davis.
Ellendale	Dickey	1,457	48	37.6	+10.4	85	28	0	8	1.84	+0.89	0.78	21-22	1.4	8	9	6	16	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	34.8	+12.1	78	28	-15	8	0.88	-0.13	0.39	5-6	4.3	9	2	13	16	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	36.8	+10.8	81	28	-3	8	2.02	+1.22	0.65	16	2.5	6	13	7	11	sw.	Helge Dyste.
Fullerton	Dickey	1,439	49	37.8	+10.7	82	28	1	8	1.71	+0.65	1.01	21-22	0.9	7	9	12	10	s.	F. O. Alin.
Gackle	Logan	1,951	16																	Mrs. Walter Kranzler.
Grafton	Walsh	827	55	34.1	+12.4	80	27	-15	8	1.00	-0.30	0.42	15	1.8	9	13	8	10	n.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	33.6	+11.1	82	27	-4	8	1.29	+0.51	0.45	29-30	2.3	8	6	10	15	se.	University of N. Dak.
Grand Forks Airt. 2 1/2 mi. W	Grand Forks	834	6	32.4		79	27	-6	8	0.89		0.44	30-31	0.1	7	3	12	16	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	34.9	+6.3	83	28	-8	9	1.41	+0.59	0.40	6	6.2	8	7	7	17	se.	Soo Line Agent.
Hannah	Cavalier	1,568	53	29.2	+10.0	71	27	-16	8	2.03	+1.31	0.85	15-16	5.7	7	6	20	5	nw.	A. E. Prior.
Hillsboro	Trall	901	41	35.4	+10.1	82	28	-8	8	0.36	-0.40	0.11	16	0.2	7	5	13	13	ne.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	35.6	+11.2	80	27	-1	8	0.72	-0.18	0.30	16	T.	4	11	6	14	s.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	6	35.3		80	27	-1	8	0.89		0.26	16	0.1	8	4	11	16	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	33.4		82	27	-11	8	0.98		0.40	14-15	0.2	5	15	5	11	ne.	U. S. Wildlife Refuge.
Langdon, 1 1/2 miles SE	Cavalier	1,615	51	30.6	+10.8	73	27	-16	8	1.33	+0.55	0.42	15	4.3	10	13	9	9	sw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	31.6	+8.9	82	27	-8	8	0.48	-0.33	0.33	21	T.	2	11	13	7	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	37.6	+10.3	82	28	-3	8	1.64	+0.91	0.45	16	3.0	8	11	7	13	se.	J. O. Halverson.
Mayville	Trall	975	51	36.0	+11.3	81	27	-5	8	0.58	-0.11	0.22	15	T.	6	6	15	10	s.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	32.1	+9.1	77	27	-14	8	0.90	+0.21	0.40	16	1.0	6	12	9	10	sw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	36.6	+8.8	86	28	-12	8	1.01	+0.23	0.80	21-22	1.0	4	16	4	11	n.	J. G. Carlson.
McVie	Nelson	1,467	5																	A. M. Casad.
Oakes	Dickey	1,318	18	36.5	+8.8	83	28	0	8	1.74	+0.94	0.66	22	0.7	9	9	11	11	sw.	H. M. Blazer.
Park River	Walsh	998	43	31.2	+8.4	77	27	-17	8	1.28	+0.62	0.46	15	0.3	6	11	12	8	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	30.7	+12.3	75	27	-13	8	0.59	-0.21	0.32	15	1.1	5	3	15	13	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	32.4		79	27	-8	8	0.36	-0.37	0.11	15	0.1	6	17	9	5	ne.	T. C. Overland.
Sharon	Steele	1,516	23	34.9	+10.7	82	27	-3	8	0.97	+0.35	0.40	15-16	0.5	5	7	18	6	s.	Nels O. Greisheim.
Valley City	Barnes	1,229	42	37.9	+11.6	82	27	0	8	1.18	+0.39	0.39	16	0.5	10	15	4	12	se.	Hettie Blythe.
Wahpeton	Richland	962	55	36.0	+8.4	79	28	-16	8	1.05	+0.33	0.40	21-22	0.7	6	12	11	8	se.	State School of Science.
Average for Eastern Division				34.2	+10.0	86	28	-17	8	1.10	+0.26	1.21	21-22	1.3	6	10	10	11	s.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	36.4	+11.5	82	28	1	8	1.68	+0.85	0.66	16-17	1.3	7	4	11	16	n.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	28.9		74	27	-18	8	1.37		0.53	16	0.9	5	2	16	13	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	30.6	+8.1	74	27	-15	8	1.45	+0.74				15	11	5	10	w.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	38.4	+13.2	81	27	11	8	1.28	-0.41	0.37	15-16	6.3	7	4	14	13	nw.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE.	Burleigh	1,650	7	37.6	+15.7	81	27	7	10	1.25	+0.36	0.67	16-17	5.0	8	4	14	13	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	30.3	+9.5	75	27	-12	4	0.89	+0.22	0.38	14-15	1.2	7	12	9	10	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	33.9	+7.5	78	27	-3	8	0.99	+0.17	0.60	16-17	2.0	4	13	5	13	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	36.6	+9.6	78	27	12	8	2.57	+1.71	1.10	21-22	11.5	7	11	12	8	nw.	J. W. Evans.
Center	Oliver	2,100	9	35.8		80	27	7	8	0.88		0.51	16	5.8	5	11	13	7	ne.	Fred L. Heinz.
Drake	McHenry	1,634	17	31.5	+6.8	79	27	-2	4	1.07	+0.37	0.72	17	1.0	3	16	10	5	w.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	51	30.6	+10.1	74	27	-10	8	0.22	-0.40	0.12	16	T.	2	15	10	6	ne.	State Tuberculosis San.
Eckman	Bottineau	1,500	41	29.0	+6.0	77	27	-14	4	0.62	+0.06	0.30	16	T.	4	14	10	7	se.	E. R. Sherman.
Fessenden	Wells	1,610	35	33.6	+9.9	80	27	-6	8	1.59	+0.84	1.02	14-15	1.0	3	14	10	7	s.	John V. Zuber.
Fort Yates	Sioux	1,670	47	40.0	+12.8	85	27	10	10	3.52	+2.71	1.20	21	7.0	5	18	6	7	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,657	26	32.6	+7.2	77	27	-5	10	0.31	-0.41	0.25	16	3.0	4	11	8	12	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	34.8	+10.4	80	27	4	10	0.91	+0.12	0.44	16	6.6	4	7	14	10	s.	Mae H. Vorachek.
Granville	McHenry	1,504	40	32.7	+8.2	81	27	-6	4	0.62	+0.08	0.27	14-15	1.0	4	20	2	9	nw.	Fred Roble.
Hansboro	Towner	1,597	39	28.8	+8.1	74	27	-15	8	1.10	+0.22	0.42	15	1.0	5	9	11	11	sw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	44							0.88	+0.11	0.45	15-16	1.0	4	10	13	8	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	31.4		78	27	-15	8	1.53		0.80	15	2.8	5	9	16	6	w.	John Dulmage.
Linton	Emmons	1,711	30	40.2	+12.2	86	27	10	8	3.33	+2.55	0.97	21-22	4.3	8	5	10	16	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	31.0	+6.7	77	27	-15	8	1.50	+0.86	0.94	15	T.	4	6	17	8	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	33	37.6	+10.8	81	27	9	8	1.37	+0.53	0.40	17	9.5	9	11				

Climatological Data for March 1946—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	54	37.3	+11.1	82	27	10	10	0.47	−0.06	0.30	17	1.5	4	16	9	6	nw.	H. W. Case.
Epping	Williams	2,224	38	35.8	+8.8	77	27	6	7	T.	−0.57	T.	14†	T.	0	22	4	5	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	18	...	...	...	...	...	...	0.41	−0.31	0.21	13	4.0	3	17	6	8	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	29	39.4	...	81	27	15	7	0.97	+0.16	0.38	8	10.7	4	10	14	7	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	6	37.6	+10.0	80	27	6	4	0.35	−0.40	0.20	13-14	3.4	6	5	13	13	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	38	36.8	+14.4	78	27	6	7	0.01	−0.67	0.01	14	0.2	1	18	6	7	se.	L. D. Nielson.
Halliday	Dunn	2,073	5	...	...	...	...	...	...	0.25	...	0.18	16	4.2	3	10	14	7	nw.	John Kisse.
Hettinger	Adams	2,675	40	40.3	+11.4	79	27	13	7	1.58	+0.92	0.91	21	14.5	6	11	12	8	ne.	Edgar Martin.
Kenmare	Ward	1,799	15	31.7	+8.5	74	27	1	8†	0.38	−0.27	0.18	1†	4.0	3	11	10	10	w.	Theo. E. Eckberg.
Marmarth	Slope	2,714	38	40.5	+11.7	78	27	15	5	1.07	+0.34	0.80	21-22	9.2	6	14	7	10	nw.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	32	41.4	...	82	27	12	18	0.77	+0.01	0.38	14	4.0	3	20	4	7	w.	Harry Roberts.
Mott	Hettinger	2,424	40	38.4	+10.8	75	27	15	7	2.16	+1.30	0.50	21	11.6	7	8	12	11	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	55	39.8	+13.7	79	27	15	7	1.65	+0.84	0.91	21-22	13.0	4	6	16	9	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn	...	5	38.0	...	78	27	14	6	0.39	...	0.20	21-22	2.1	5	12	10	9	w.	Peter F. Fickel.
Parshall	Mountrail	1,929	32	34.4	+9.1	80	27	4	10	0.25	−0.33	0.22	16	T.	3	4	22	5	sw.	C. E. Shubert.
Portal	Burke	1,954	33	30.4	+12.0	76	27	−3	7	0.39	−0.22	0.13	31	2.2	5	18	5	8	sw.	U. S. Customs Service.
Powers Lake	Burke	2,205	42	32.6	+7.1	76	27	−2	7	0.15	−0.55	0.10	14	1.2	2	9	15	7	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	31	38.7	+11.5	78	27	13	7	1.64	+0.92	0.80	16†	13.0	3	15	5	11	...	Assumption Abbey.
Ryder	Ward	2,108	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	S. C. Schellenbaum.
Sanish	Mountrail	1,835	21	31.8	+7.0	80	27	9	10	0.39	−0.19	0.20	16	2.5	4	11	15	5	w.	H. J. Bugge.
Stanley	Mountrail	2,258	9	30.4	...	76	27	−3	7†	0.09	...	0.09	31	0	1	12	12	7	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	18	...	...	...	...	...	...	0.13	−0.49	0.09	16	1.3	4	15	10	6	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	18	...	...	...	...	...	...	T.	−0.63	T.	14†	T.	0	13	9	9	sw.	L. A. Simon.
Trotters	Golden Valley	...	21	...	...	...	...	...	...	0.44	−0.33	0.18	14	4.5	5	5	21	5	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	6	35.9	...	80	27	6	10	0.20	...	0.18	15-16	0.6	2	14	11	6	w.	H. Glenn Sims.
Watford City	McKenzie	2,084	34	38.3	+12.1	81	27	9	7	0.06	−0.63	0.06	13	0	1	10	15	6	w.	J. C. Zeller.
Wildrose	Williams	2,258	17	...	...	...	...	...	...	T.	−0.62	T.	14†	0	0	24	2	5	sw.	Jonathan Winkjer.
Williston	Williams	1,878	68	37.8	+14.9	79	27	9	7	0.08	−0.61	0.04	14†	0.5	2	7	11	13	se.	U. S. Weather Bureau.
Average for Western Division				36.6	+10.8	82	27	−4	6	0.56	−0.21	0.91	21-22	4.7	4	12	11	8	nw.	
Average for the State				34.8	+10.8	86	27†	−22	8	0.59	+0.19	1.64	21-22	2.9	5	11	10	10	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for March 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum...	40	43	38	32	35	40	26	31	33	31	57	59	52	53	42	38	35	36	53	61	46	35	49	59	55	67	78	82	50	49	71	47.6	
	Minimum...	22	24	15	6	18	23	3	1	10	6	11	27	33	31	32	31	30	28	25	36	34	35	27	32	27	30	40	39	34	35	38	25.1	
Bismarck Airport	Maximum...	45	44	39	35	43	44	28	39	36	36	55	61	53	48	38	36	39	37	55	62	42	85	46	61	59	70	81	68	45	49	54	47.8	
	Minimum...	25	27	19	14	23	26	11	11	15	7	20	29	29	32	33	32	30	23	30	36	33	32	29	30	26	32	40	39	36	39	39	27.3	
Bottineau	Maximum...	35	36	31	24	35	32	29	21	25	22	42	42	42	37	36	36	38	38	38	43	45	45	52	53	55	75	60	49	43	43	40.1		
	Minimum...	8	4	18	-12	11	15	0	-12	10	-4	17	14	32	22	32	31	30	21	21	33	32	29	32	31	28	30	30	40	30	30	30	20.5	
Carson	Maximum...	45	46	48	37	40	43	32	42	39	44	63	60	50	39	40	34	38	37	56	55	40	34	40	55	56	70	78	71	45	45	57	47.7	
	Minimum...	27	25	24	15	15	21	14	12	12	13	22	29	28	29	30	28	22	26	33	29	27	23	28	23	24	37	40	32	37	40	25.6		
Crosby	Maximum...	38	39	24	34	37	31	14	38	29	36	46	49	42	33	35	34	41	35	50	38	43	45	49	52	50	70	72	52	42	39	39	41.2	
	Minimum...	13	17	13	1	3	16	2	2	12	5	12	27	29	28	27	27	24	22	23	30	24	23	24	30	32	38	38	28	28	31	21.3		
Devils Lake	Maximum...	37	36	37	23	35	31	22	24	23	25	40	44	43	36	37	36	36	32	51	57	45	46	50	58	46	65	79	64	49	39	39	41.5	
	Minimum...	12	12	10	-2	11	15	-3	7	5	-3	16	25	29	28	33	33	31	30	29	35	32	28	34	34	31	35	45	39	33	32	31	23.0	
Dickinson Airport	Maximum...	47	58	40	43	43	30	48	34	47	62	59	50	35	35	33	45	38	58	62	40	33	40	55	55	69	79	64	48	38	46	56	47.9	
	Minimum...	30	28	21	20	21	19	13	21	18	17	33	28	32	28	30	29	25	20	28	33	30	27	26	30	27	34	41	36	30	37	37	27.4	
Dunn Center	Maximum...	46	51	42	42	44	45	33	46	37	47	61	60	54	38	37	35	46	40	58	59	48	38	50	57	58	71	80	67	47	48	47	49.4	
	Minimum...	25	27	25	20	22	22	14	15	28	13	27	27	35	30	31	30	28	18	26	31	30	27	29	30	26	32	36	37	31	38	34	27.2	
Fargo Airport	Maximum...	40	37	35	25	34	35	26	19	30	22	38	43	52	49	47	40	36	42	52	59	49	45	44	41	55	68	78	78	54	45	50	44.1	
	Minimum...	13	22	14	6	18	18	-1	15	4	6	20	24	31	30	37	35	34	32	30	38	38	33	35	30	26	32	43	45	38	35	33	25.3	
Fessenden	Maximum...	40	37	37	30	36	37	29	29	25	27	42	46	41	36	35	34	36	33	53	57	44	45	51	60	52	68	80	73	49	46	43	43.6	
	Minimum...	13	14	17	7	14	13	7	-6	6	-4	19	25	32	28	31	31	30	23	28	36	33	28	33	33	29	34	40	43	33	33	31	23.7	
Fullerton	Maximum...	42	38	38	29	37	38	26	29	30	28	51	57	51	48	46	40	40	41	52	60	54	38	50	46	57	68	79	82	58	51	72	47.7	
	Minimum...	22	27	28	14	22	26	12	1	10	8	18	31	32	31	38	35	33	32	29	36	38	32	34	33	31	30	35	38	37	36	37	27.9	
Garrison	Maximum...	41	40	35	40	42	40	22	39	30	36	50	57	41	33	36	35	40	33	52	57	44	47	49	57	57	71	80	65	46	46	45	45.4	
	Minimum...	16	20	10	9	17	19	5	16	4	20	30	31	30	31	31	23	16	28	32	30	26	31	30	27	34	38	38	32	36	33	24.1		
Golva	Maximum...	49	66	37	45	44	46	33	50	40	56	64	61	49	33	40	39	46	64	58	44	33	54	53	55	70	80	65	39	60	63	51.0		
	Minimum...	28	24	21	6	18	14	16	19	16	14	29	24	29	27	23	26	16	8	24	25	28	26	27	24	24	34	39	36	30	35	40	24.2	
Grafton	Maximum...	37	38	35	25	32	35	32	16	21	25	37	38	50	44	43	44	40	40	50	61	59	49	49	51	52	66	80	77	55	49	37	44.4	
	Minimum...	9	12	22	5	5	24	14	-15	9	-6	12	28	31	27	36	35	33	31	27	34	36	29	35	37	30	31	42	40	34	30	30	22.0	
Grand Forks Airport	Maximum...	37	36	31	25	34	34	25	17	27	20	37	40	38	40	44	38	37	43	50	60	49	48	44	45	50	68	79	68	53	41	41	42.2	
	Minimum...	11	10	6	0	9	9	-1	-6	11	-4	14	24	28	27	37	34	33	29	27	36	31	29	34	31	29	30	41	40	35	30	31	22.2	
Jamestown Airport	Maximum...	39	36	35	29	36	36	24	26	27	28	49	51	48	48	40	39	37	42	54	61	43	41	51	56	55	69	80	74	45	45	55	45.5	
	Minimum...	17	25	15	4	17	24	1	-1	13	1	17	30	30	31	34	33	32	29	29	36	35	31	32	33	28	32	42	37	35	35	35	25.2	
Kenmare	Maximum...	38	40	25	35	36	35	19	36	24	36	48	45	44	34	35	31	40	33	43	45	41	42	49	53	56	67	74	58	40	43	35	41.1	
	Minimum...	15	20	17	9	10	18	3	1	9	1	2	29	32	28	29	30	27	18	19	32	26	21	23	31	29	35	40	39	29	30	30	22.2	
Langdon	Maximum...	32	28	36	25	30	32	25	17	28	22	40	39	43	42	38	37	36	37	50	52	46	43	45	56	50	61	73	70	48	46	33	40.4	
	Minimum...	5	8	18	-3	5	15	9	-10	2	-12	12	20	30	24	31	30	24	31	27	27	34	30	27	31	33	30	31	37	38	30	26	25	20.0
Marmarth	Maximum...	52	53	48	48	48	45	35	50	46	55	66	66	55	47	45	42	50	50	65	65	47	36	47	57	55	68	78	73	56	54	63	54.4	
	Minimum...	27	24	29	19	15	18	18	22	24	20	20	22	33	30	30	30	20	20	28	30	33	22	28	23	24	31	41	41	28	36	41	26.1	
Minot Airport	Maximum...	38	40	40	33	38	34	23	33	24	32	44	49	42	33	34	33	35	31	48	46	42	42	48	54	54	73	78	58	45	39	38	42.2	
	Minimum...	20	20	9	8	21	17	5	5	7	3	30	29	31	29	31	31	25	20	28	33	27	24	33	34	28	40	47	34	30	33	31	24.4	
Mott	Maximum...	48	62	60	42	43	35	38	44	39	47	64	63	54	48	38	37	44	46	62	46	38	40	44	42	46	62	75	72	54	47	57	49.9	
	Minimum...	28	27	26	18	20	22	15	18	22	18	21	26	30	31	31	31	28	22	34	30	28	27	26	22	28	26	34	33	31	36	40	26.0	
Pembina Airport	Maximum...	38	34	31	22	32	34	21	17	23	21	37	42	44	39	40	40	37	39	48	56	46	50	47	52	46	63	75	64	50	36	35	40.0	
	Minimum...	8	8	7	-8	6	20	-5	-13	4	-7	10	20	29	27	35	34	32	30	24	34	31	27	34	32	30	30	39	38	34	26	30	20.0	
Sharon	Maximum...	33	35	33	27	35	35	26	28	29	26	44	49	48	41	43	37	37	44	54	59	53	47	48	58	51	70	82	68	48	44	41	44.4	
	Minimum...	13	13	22	6	13	24	8	-3	11	2	15	27	33	30	34	34	33	29	33	35	34	34	33	35	38	30	42	42	33	32	30	25.5	
Steele	Maximum...	41	37	39	30	37	38	27	33	27	30	47	50	45	42	39	35	36	35	53	62	59	41	48	60	55	70	80	71	58	49	50	45.4	
	Minimum...	16	20	23	2	13	19	12	0	15	3	14	20	30	28	33	31	31	27	27	37	35	31	27	30	24	28	36	41	34	36	36	24.0	
Valley City	Maximum...	43	36	37	30	38	40	34	26	32	29	47	56	54	47	45	43	39	46	54	63	58	44	50	46	60	70	82	77	61	44	54	47.7	
	Minimum...	18	27	26	9	18	27	17	0	12	10	17	27	34	31	39	36	34	32	29	38	39	32	35	35	25	28	43	42	36	35	35	27.7	
Wahpeton	Maximum...	39	39	31	30	31	34	34	19	29	29	38	44	48	48	43	43	43	41	53	59	58	48	42	41</									

Daily Precipitation for March 1946

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James						.08			.03								T				.05		T.								T.	0.54		
Casselton	Red.															.04	.15	.10												.12		.32	0.86		
Cooperstown	Sheyenne	.07														.20	.35														.11		0.83		
Courtenay	James									T.	T.					.30	.40	T.													T.	.12	.01	0.73	
Devils Lake ^{1 5}	Devils Lake						T.	T.	T.	T.	T.			T.	.08	.14	.53	.06													.17	.01	1.32		
Edgley	James		.02			.04				.02	T.					.17	.39	T.	.02				.19	1.21	.08	T.	T.				.23	T.	2.11		
Edmore	Devils Lake	.09					.05	.05	T.	T.	T.					.31	.52							T.									1.20		
Ellendale	James						.05			.06						.17	.49	.23					.05	.73	.06								1.84		
Fargo ^{1 5}	Red.					.09	.30	T.		.01	T.				T.	T.	.05	.01	T.	T.		.08	T.		T.					.05	.03	.26	0.88		
Forman	Sheyenne						.20									.24	.65	.25					.04	.64									2.02		
Fullerton	James						.07			.02						.16	.32	.10	T.				.03	1.01									1.71		
Gackle	do																																		
Grafton	Red.	.10					.05	T.			T.					.42	.12	.01		T.		.04		.04	T.						.15	.07	1.01		
Grand Forks Airport ³	do	T.					.40	.08			T.	T.				.25	.01	T.				.06			.07	T.					.41	.08	0.89		
Hankinson ²	do					T.	.03		.04							.55	.85	.20	.06					.28	.16								2.03		
Hannah	Pembina															.55	.11	.01												.01	.02	.05	0.36		
Hillsboro	Red.						.06	T.	T.	T.	T.					.10	.11	.01				T.	T.		T.								1.33		
Jamestown Airport ³	James						T.	.05	.03	.02	.02		.05			.16	.26	.02				T.	.11	T.						.04	.15	.08	0.89		
Langdon	Pembina				T.											.42	.25	.23													.21	.05	1.33		
Larimore	Red.	T.									T.																				T.	.15	0.48		
Lisbon	Sheyenne						.15									.30	.45	.13				.33	.41	.03						.09			1.64		
Mayville	Red.						T.	T.		T.	T.					.22	.07	.02	T.					.07									0.58		
McHenry	James	.07														.28	.40	.07													.13	.07	0.90		
McLeod	Sheyenne						.09									.09	.10	.04															1.01		
Oakes ²	James						.07	T.			.01					.09	.10	.34	.26		T.	.56	.29	.02									1.74		
Park River	Red.										.02					.46	.31														.35	.16	1.28		
Pembina Airport ³	do	T.					.02	T.	T.	T.				T.	.32	.10	T.														.03	.12	0.59		
Petersburg	do						.01	T.		T.	T.					.11			.04					.05							.09	.06	0.36		
Sharon	do	T.					.04	T.								.26	.40	T.								T.						.22	.05	0.97	
Valley City	Sheyenne						.02				T.					.09	.39	.14	.03					.04									.32	1.18	
Walhpton	Red.						.29									.04	.06	.25				T.	.40								.01		1.05		
Middle Division																																			
Ashley ³	Missouri									T.	.03	T.			T.	.07	.54	.29				.35	.39	.01						T.	T.	T.	1.68		
Bisbee	Devils Lake															.20	.62	.05													T.	T.	1.45		
Bismarck Airport ^{1 5}	Missouri				T.	T.		T.	.01	.10					.10	.38	.24	.03				.07	.10	T.							T.	T.	1.25		
Bottineau ²	Mouse						.03									.35	.41	.19													.04	T.	.03	0.89	
Butte	do	.06														.24	T.	.72															0.99		
Carson	Heart	T.						T.	T.	.11					.04	.14	.33	.16					.69	1.10									2.57		
Center	Missouri									.10						.22	.32	.19					T.	.05									0.88		
Drake ²	Mouse															.24	T.	.72														.11	T.	1.07	
Dunseith	do	T.					T.									T.	T.	.12	.10													T.	0.22		
Eckman	do															.06	.14	.30															.12	0.62	
Fessenden	James															.26	1.02	.31														T.	1.59		
Fort Yates	Missouri									.25						T.	T.	.80	.55														3.52		
Foxholm	Mouse	T.														.03	.02	.25	T.				1.20	.72							T.	.01	0.31		
Garrison ³	Missouri								T.	.04						.28	.15	.44	T.														0.91		
Granville	Mouse															T.	.27	.20	.07														.08	0.62	
Hansboro	Devils Lake															.04	.42	.37	.11												.16	T.	1.10		
Linton	Missouri								T.	.15						.03	.53	.65	.22				.75	.97	.03							T.	3.33		
Maddock	Sheyenne															.94	.32	.16														T.	1.50		
Mandan ²	Missouri	.01					T.		.02	.36						.01	.14	.20	.40					.07	.16							.08	T.	1.37	
Max ²	do															T.	.51	.28															T.	0.79	
McClusky	do															T.	.25	.44	.23														T.	0.95	
Minot Airport ³	Mouse				T.				T.	T.			T.	T.		.17	.03	.30	T.		T.												T.	0.50	
Mohall	do					.04										.06	.03	.21															.03	0.39	
Napoleon	Missouri															.11	.61	.12															.02	1.98	
New Salem	Heart								T.	.03						.03	.10	.33	.03				.44	.68	.01									0.67	
Pettibone	James															.48	.59	.27															.05	1.39	
Rolla	Devils Lake						T.			T.	T.					T.	.48	.38	.24														.21	.05	1.36
Rugby	Mouse	.10														T.	T.	.56	.25														.12	1.03	
Selfridge	Missouri								.18							.29	.48						.82	1.60								.10	T.	3.47	
Steele	do								T.	T.						T.	.82	.67	.21													.04		1.74	
Towner	Mouse	.10			T.											.36	.74	.12	.59														.15	2.06	
Turtle Lake	Missouri	.06														.22	.42	.07														.03		0.80	
Tuttle	do	T.						T.		.03						.04	.40	.70	.07				.01	.01									.01	1.27	
Underwood	do								T.	.08						T.	.40	.30	.25															1.03	
Volva	Mouse				T.											.02	.32	.41	.05													.05	T.	0.85	
Washburn	Missouri								T.	.10						.29	.19	.20																0.78	
Westhope	Mouse															.06	.12	.20															.06	.03	0.47
Willow City	do					T.										.02	.13	.18	.10													.15	T.	0.58	
Wishek ²	Missouri	.02									T.					.43	.19	.60	T.	T.		.03	.57	.17	.02							T.		2.03	
Western Division																																			
Alpha	Lit. Missouri				T.	T.																													

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

1 Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

^b Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 5-20-46-1050]

551.05
NNNT
V.554

2 + 21st
Nat 21st

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LV BISMARCK, N. D., APRIL 1946 No. 4

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The warm cycle that began early in the year continued throughout April, with but a few days early in the month below the daily normal. The month averaged 6.6° above the 55 year average and was the warmest April since 1915.

Precipitation was very light, averaging 0.75 inch less than the normal. Amounts of consequence occurred on only two days, the 3d and 22d. The precipitation on the 3d occurred as snow over the southeastern portion of the state with an unusually heavy snowfall for so late in the season; a few stations reported more than 10 inches. Fullerton recorded 20.6 inches; Lisbon, 19.0 inches; Oakes, 14.5 inches; and Valley City, 12.5 inches.

Dast was observed over the western portion of the state on the 26th, 27th, and 30th. Wind velocity was above normal for the month; this was another unfavorable factor for drying the topsoil.

bined conditions advanced all growth about two weeks ahead of the seasonal with most of the spring wheat and other grains planted by the close of the month and some of the early planted wheat was up. Pastures and hay meadows were greening slowly due to continued dry weather. Most of the state was in need of moisture at the close of the month as the topsoil had become quite dry, especially in the west and central portions.—M. S. C.

TEMPERATURE

The mean temperature for the state was 48.2°, or 6.6° above the 1892-1946 average for April. The mean temperature for the eastern division was 47.3°; for the middle division, 48.4°; and for the western division, 48.9°. The highest mean temperature was 51.0° at three stations, and the lowest, 44.6° at Belcourt, making a range in mean temperature of 6.4°. The absolute range was 78°, from 87° at Sanish on the 30th, to 9° at Golva on the 8th. The average daily excess in temperature for the state since January 1, 1946, is 5.6°.

PRECIPITATION

The average precipitation for the state was 0.67 inch, or 0.75 inch less than the 1892-1946 average for April. In the eastern division the average amount was 0.96 inch; in the middle division, 0.58 inch; and in the western division, 0.48 inch. The greatest monthly amount reported was 2.56 inches at Lisbon; the least was only a trace at Tioga. The greatest amount recorded in any 24 consecutive hours was 2.06 inches at Fullerton on the 3d. The accumulated deficiency in precipitation for the state since January 1, 1946, is 0.63 inch. The average snowfall was 2.4 inches.

UNIVERSITY OF ILLINOIS

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.31	15	29.42	1	12.8	43	se.	30	66	74	38	36	75	433
Devils Lake...	30.35	26	29.44	1	10.3	33	nw.	17	69	73	44	41	66	537
Fargo.....	30.36	26	29.62	3	14.2	40	w.	2	73	81	49	48	69	534
Williston.....	30.21	25	29.48	1	8.9	35	w.	1	55	64	35	31	68	439

† And other dates.

COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	37.6	75	-2	2.58	3.09	2.29	2.65	6.3	7	10	6	14	
1893...	34.3	77	-8	2.45	1.56	1.09	1.70	7.8	6	7	9	14	
1894...	42.8	92	12	3.66	2.93	2.50	3.03	4.4	3	12	8	10	
1900...	49.3	93	11	0.75	0.75	1.05	0.85	4.4	3	20	6	4	
1901...	44.5	92	10	1.40	0.72	0.82	0.98	0.3	4	12	9	9	
1902...	40.2	87	-2	1.35	0.88	0.95	1.06	2.9	3	12	8	10	
1903...	42.5	83	8	1.67	1.10	0.92	1.23	2.7	5	16	6	8	
1904...	37.4	91	2	2.22	1.21	0.72	1.38	8.1	5	13	5	12	
1905...	40.2	83	3	1.04	0.38	0.11	0.51	3.7	3	15	8	7	
1906...	46.7	88	8	1.96	1.06	1.48	1.50	1.3	5	14	7	9	
1907...	31.9	80	-6	0.77	0.36	0.44	0.52	4.2	4	10	9	11	
1908...	43.9	91	-19	1.12	1.53	1.91	1.52	5.9	5	16	6	8	
1909...	34.2	80	3	0.95	0.71	0.64	0.77	5.1	6	10	9	11	
1910...	48.0	96	4	1.52	1.03	1.56	1.37	2.9	4	16	8	6	
1911...	41.5	90	-5	2.12	0.80	0.64	1.19	6.3	5	15	6	9	
1912...	44.4	88	2	2.61	2.32	2.22	2.35	1.7	7	14	8	8	
1913...	46.8	94	11	1.00	0.70	0.23	0.64	2.4	4	16	6	8	
1914...	40.9	84	2	2.49	1.31	0.58	1.46	2.8	6	9	10	11	
1915...	50.3	99	5	1.42	0.98	0.68	1.03	T	5	15	8	7	
1916...	39.2	79	-6	1.70	1.07	1.54	1.44	2.9	5	10	10	10	
1917...	37.2	73	5	1.89	1.67	1.49	1.68	5.6	7	9	9	12	
1918...	41.4	81	0	2.38	1.87	2.28	2.18	3.0	7	12	8	10	
1919...	42.3	79	6	1.45	1.40	1.72	1.52	6.2	6	11	9	10	
1920...	32.1	63	-11	0.73	0.67	1.12	0.84	2.1	5	13	8	9	
1921...	41.1	91	1	1.84	2.07	1.40	1.77	3.8	7	14	-7	9	
1922...	42.3	89	-2	1.17	0.79	0.79	0.92	2.3	6	10	9	11	
1923...	38.7	89	-15	1.22	1.63	1.51	1.45	7.2	5	13	8	9	
1924...	39.3	84	6	3.94	2.31	1.35	2.53	7.5	9	8	9	13	
1925...	47.8	85	10	2.21	1.37	1.22	1.60	T	6	11	10	9	
1926...	42.8	98	-4	0.17	0.34	0.32	0.28	0.9	3	17	8	5	
1927...	41.4	95	7	2.05	1.46	1.67	1.73	2.3	7	10	8	12	
1928...	35.9	84	-6	0.92	0.88	0.92	0.91	5.0	5	12	10	8	
1929...	41.5	85	-9	1.68	1.36	0.88	1.31	3.4	6	12	9	9	
1930...	47.3	86	8	1.16	1.14	1.45	1.25	0.5	6	14	7	9	
1931...	44.1	87	3	0.75	0.37	0.18	0.43	0.7	2	18	8	4	
1932...	44.1	79	0	2.50	2.09	1.84	2.14	0.7	8	9	9	12	
1933...	40.0	84	2	1.44	1.20	1.35	1.33	7.3	5	11	9	10	
1934...	43.7	95	7	0.75	0.34	0.24	0.44	1.9	3	15	8	7	
1935...	38.4	83	0	2.62	1.75	1.42	1.93	3.6	8	9	9	12	
1936...	35.6	87	-15	0.53	0.26	0.37	0.39	0.5	4	14	10	6	
1937...	40.7	79	2	3.44	1.56	1.06	2.02	5.8	8	8	9	13	
1938...	42.8	90	1	1.68	0.96	0.64	1.09	0.1	5	11	10	9	
1939...	41.6	90	-1	0.93	0.66	1.03	0.87	0.8	6	12	9	9	
1940...	37.8	78	-9	1.84	2.36	2.45	2.22	4.1	8	7	10	13	
1941...	44.1	82	6	3.05	2.13	1.71	2.30	1.6	13	6	9	15	
1942...	44.9	90	-6	2.12	1.75	2.01	1.96	3.3	7	11	9	10	
1943...	44.9	83	11	1.46	1.56	1.42	1.48	0.1	5	15	10	5	
1944...	40.8	77	-11	0.74	0.83	0.84	0.80	0.2	4	14	7	9	
1945...	38.0	80	6	1.52	0.82	0.97	1.10	4.5	6	7	12	11	
1946...	48.2	87	9	0.96	0.58	0.48	0.67	2.4	4	14	11	5	
Period	41.6	99	-22	1.73	1.32	1.22	1.42	3.1	6	12	8	10	

NAT.
HIST.

CLIMATOLOGICAL DATA: NORTH DAKOTA SECTION

APRIL 1946

Climatological Data for April 1946

Climatological Data for April 1946																					
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days					Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Arvilla, 14 mi. N	Grand Forks	960	3	47.3	.....	86	30	14	9	0.23	.....	0.13	3	1.2	4	21	7	2	nw.	Albert Thoren.
Carrington	Foster	1,579	49	47.6	+8.0	81	30	20	9	0.72	-0.61	0.52	3-4	3.0	3	10	9	11	.....	Soo Line Agent.
Casselton	Cass	934	51	.....	.....	83	30	20	8	1.67	-0.08	.....	16	3.0	2	5	24	1	se.	Joseph L. Farrell.
Cavalier	Pembina	894	39	46.3	.....	83	30	20	8	0.57	-0.82	0.30	3	6.0	2	16	12	2	ne.	City Light & Power Co.
Colgate	Steele	1,180	13	.....	.....	80	30	18	9	0.98	-0.63	0.58	3	2.4	3	12	9	9	nw.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	46.4	+6.1	80	30	18	9	0.53	-0.86	0.24	3	0.6	5	12	12	6	nw.	R. J. Lockner.	
Courtenay	Stutsman	1,523	16	.....	.....	80	30	22	9	0.54	-0.89	.....	13	0.6	5	12	12	6	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	71	47.1	+8.3	80	30	22	9	0.23	-1.29	0.09	3	8.5	4	15	12	3	se.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	Lamoure	1,568	46	48.5	+5.9	80	30	19	9	0.84	-0.91	0.57	3	T	3	22	6	2	nw.	N. Dak. Agr. Exp. Sta.	
Edmore, 14 miles W.	Ramsey	1,524	23	44.8	+5.5	80	30	21	9	0.57	-0.69	0.45	14	T	3	15	12	4	s.	Mike Davis.	
Ellendale	Dickey	1,457	48	49.2	+6.5	80	30	18	6	1.67	-0.19	1.34	3	13.0	4	18	4	8	n.	J. E. Demmer.	
Fargo Airport, 24 mi. NNW	Cass	1,895	66	47.4	+6.8	82	30	23	6	1.10	-1.08	0.73	3	7.4	6	10	16	4	n.	U. S. Weather Bureau.	
Forman	Sargent	1,249	55	49.4	+5.4	78	30	23	6	1.23	-0.78	0.98	3	5.0	2	24	4	2	n.	Helge Dyste.	
Fullerton	Dickey	1,439	49	50.0	+7.3	81	30	20	6	2.34	-0.78	2.06	3	20.6	3	13	15	2	nw.	F. O. Alin.	
Gackle	Logan	1,951	16	.....	.....	84	30	21	9	0.43	-0.91	0.27	13	1.0	4	8	18	4	s.	Mrs. Walter Kranzler.
Grafton	Walsh	827	55	48.0	+7.4	84	30	21	9	0.43	-0.91	0.27	13	1.0	4	8	18	4	s.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	56	47.0	+5.7	84	30	24	4	0.43	-1.23	0.14	27	5.5	6	10	15	5	se.	University of N. Dak.	
Grand Forks Aprt., 24 mi. W	Grand Forks	834	6	46.0	.....	84	30	22	9	0.28	-1.23	0.19	3	3.2	3	9	12	9	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	47.9	+4.4	79	29	20	9	1.33	-0.68	0.61	4	5.0	4	7	11	12	nw.	Soo Line Agent.	
Hannah	Cavalier	1,568	53	44.7	+6.8	81	30	20	9	0.57	-0.55	0.22	3	8.0	4	10	14	6	nw.	A. E. Prior.	
Hillsboro	Traill	901	41	48.4	+6.2	84	30	22	5	1.05	-0.83	0.75	3	6.8	4	17	10	3	sw.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	55	48.8	+7.1	81	30	19	9	0.90	-0.80	0.56	3	6.5	4	11	11	8	nw.	N. Dak. State Hospital.	
Jamestown Airpt., 2 mi. NE	Stutsman	1,494	6	47.7	.....	81	30	21	6	1.15	-0.81	0.3	8.0	2	17	8	5	se.	U. S. Airway Comm. Sta.	
Kensal, 7 miles SW	Stutsman	1,440	51	46.0	+8.4	82	30	20	9	0.66	-0.57	0.35	7	0.5	5	13	12	5	nw.	U. S. Wildlife Refuge.	
Langdon, 14 miles SE	Cavalier	1,615	54	44.8	+4.6	84	30	15	9	0.25	-1.35	0.23	3	3.0	2	16	4	10	nw.	V. Sturlauson.	
Larimore	Grand Forks	1,134	54	47.0	+4.9	76	13	19	6	2.56	+0.63	1.53	4	19.0	9	11	5	14	nw.	Jesse P. Phillips.	
Lisbon	Ransom	1,091	43	47.8	+6.3	83	30	22	9	0.81	-0.74	0.51	3-4	5.4	6	16	10	4	nw.	J. O. Halverson.	
Mayville	Traill	975	51	48.8	+6.3	83	30	17	9	0.68	-0.69	0.51	3-4	5.4	6	16	10	4	nw.	H. A. Ragaz.	
McIntosh, 6 miles NNE	Eddy	1,509	24	46.4	+5.8	82	30	17	9	0.68	-0.69	0.51	3-4	7.5	5	24	3	3	n.	C. E. Blasky.	
McLeod, 3 miles E	Richland	1,075	35	47.8	+4.2	82	30	20	6	1.43	-0.56	0.70	3	7.5	5	24	3	3	n.	J. G. Carlson.	
McVille	Nelson	1,467	5	.....	.....	81	30	20	6	1.97	-0.10	1.07	4	14.5	6	10	18	2	nw.	A. M. Casad.
Oakes	Dickey	1,315	18	49.2	+6.4	81	30	20	6	0.65	+0.67	0.55	13	0.4	3	19	6	5	nw.	H. M. Blazer.	
Park River	Walsh	998	43	45.0	+4.5	82	30	15	9	0.71	-0.55	0.31	13	0.6	6	7	14	9	s.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	795	73	44.8	+6.3	78	30	20	8	0.71	-0.55	0.31	13	1.5	6	11	17	2	sw.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	16	45.1	.....	81	30	18	9	0.43	-0.96	0.23	3	4.0	3	16	10	4	sw.	T. C. Overland.
Sharon	Steele	1,516	23	46.8	+7.2	81	30	19	9	0.41	-1.07	0.35	3	4.0	3	16	10	4	sw.	Nels O. Grefsheim.	
Valley City	Barnes	1,229	42	49.9	+7.5	82	30	22	6	2.28	+0.55	1.82	3-4	12.5	5	18	6	6	nw.	Hettie Blythe.	
Walhapon	Richland	962	55	49.8	+5.6	82	30	23	9	1.44	-0.64	0.96	3	3.0	8	16	11	5	nw.	State School of Science.	
Average for Eastern Division				47.3	+6.1	86	30	14	9	0.96	-0.77	2.03	3	5.7	4	14	11	5	nw.	U. S. Airway Comm. Sta.	
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,025	51	47.2	+4.8	77	30	22	9	0.97	-0.64	0.79	3	7.7	3	14	12	4	se.	Turtle Mt. Indian Agcy.	
Belcourt	Rolette	1,950	2	44.6	82	30	18	6	0.41	-0.73	0.29	13	T	0	2	23	4	3	n.	Robert L. Peterson.
Bisbee	Towner	1,601	44	46.6	+5.9	80	30	23	6	0.46	-0.73	0.25	7	0	5	7	15	8	nw.	U. S. Weather Bureau.	
Bismarck	Burleigh	1,670	72	51.0	+7.9	82	30	26	9	1.13	-0.06	0.60	3	2.7	6	7	15	8	nw.	U. S. Weather Bureau.	
Bismarck, 2 miles NNE	Burleigh	1,650	7	50.6	+10.2	84	30	26	9	1.04	-0.48	0.60	3	2.7	6	7	15	8	nw.	U. S. Weather Bureau.	
Dismant, 2 miles NNE	Rolette	1,682	51	46.6	+7.1	84	30	18	8	0.03	-0.81	0.03	13	0	1	10	17	3	nw.	Geo. A. Paulus.	
Eckman	Bottineau	1,500	41	45.7	+5.3	83	30	15	8	0.21	-0.70	0.13	9-10	0	3	14	12	4	nw.	State Tuberculosis San.	
Fessenden	Wells	1,610	35	48.8	+8.4	83	30	21	4	0.24	-1.08	0.13	22	1.0	2	11	13	6	sw.	E. R. Sherman.	
Fort Yates	Sioux	1,670	47	51.2	+6.4	83	30	26	11	1.67	+0.32	1.00	2	4.0	3	17	10	3	nw.	John V. Zuber.	
Foxholm, 68 miles NE	Ward	1,657	26	47.7	+6.9	84	30	20	8	0.17	-1.08	0.12	9-10	0	3	13	6	11	nw.	P. J. Jacobson.	
Garrison	McLean	1,911	70	48.8	+6.7	85	30	20	8	0.22	-0.94	0.10	3	0.6	5	11	11	8	nw.	U. S. Wildlife Refuge.	
Granville	McHenry	1,504	40	48.9	+8.1	85	30	19	8	0.37	-0.57	0.25	10	0	6	22	4	4	nw.	Mae H. Vorachek.	
Hansboro	Towner	1,597	39	45.0	+6.4	82	30	18	9	0.25	-1.00	0.19	13	0	4	8	16	6	nw.	Fred Roble.	
Harvey, 3 miles SE	Wells	1,596	44	.....	.....	84	30	22	9	0.26	-1.02	0.12	13	0.6	4	16	8	6	sw.	W. E. Disher.
Leeds	Benson	1,515	6	48.4	.....	84	30	22	9	0.40	-0.22	0.11	11	0	6	8	19	3	sw.	H. J. Reynolds.
Linton	Emmons	1,711	30	51.8	+9.0	83	29	24	4	1.61	+0.33	0.91	3	3.0	4	13	12	5	nw.	John Dulmage.	
Maddock, 1 mile E	Benson	1,604	32	48.2	+7.6	85	30	21	9	0.18	-0.94	0.07	17	1	4	11	15	4	nw.	Wm. Heyerman.	
Mandan, 14 miles SW	Morton	1,750	33	50.8	+8.2	86	30	25	9	1.28	0.00	0.66	3	1.7	6	14	8	8	se.	Benson Cy. A. & T. Sch.	
Max	McLean	2,093	18	48.0	+7.4	82	30	20	8	0.15	-1.10	0.10	9	0	2	15	7	8	nw.	No. Gt. Plains Field Sta.	
McClusky	Sheridan	1,943	29	49.3	+8.2	83	30	24	8	0.25	-0.99	0.10	22	0.5	4	14	9	7	nw.	U. S. Airway Comm. Sta.	
Medina, 14 miles W	Stutsman	1,816	6	.....	.....	84	30	22	8	0.69	-0.53	0.60	13	1	3	7	12	11	nw.	U. S. Agr. Exp. Sta.
Minot Airport, 1 mile N	Ward	1,724	51	48.4	+7.6	82	30	22	8	0.31	-0.20	0.71	9-10	0.5	3	14	12	4	nw.	N-C Agr. Exp. Sta.	
Minot, 4 mi. S.	Ward	1,760	1	49.0	.....	84	30													

Climatological Data for April 1946—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Elbowoods	McLean	2,082	54	48.7	+5.7	85	30	15	8	0.26	-0.75	0.09	3	0	4	16	10	4	nw.	H. W. Case.
Epping	Williams	2,224	38	49.6	+7.9	86	30	18	8	0.18	-0.81	0.18	1	0	1	24	4	2	nw.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	18							0.37	-0.85	0.19	30	0	4	21	6	3	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	29	50.7		85	30	21	8	0.54	-0.75	0.16	21	0	7	15	10	5	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	6	47.4	+5.2	81	29	9	8	0.76	-0.42	0.45	30	0	6	3	22	5	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	38	50.5	+11.2	83	29 1/2	18	8	0.08	-0.95	0.08	13	0	1	22	6	2	uw.	L. D. Nielson.
Halliday	Dunn	2,073	5							0.42		0.30	3	0	4	21	7	2	nw.	John Kisse.
Hettinger	Adams	2,675	40	51.0	+8.1	84	30	24	21	0.75	-0.31	0.29	3	0	7	13	9	8	uw.	Edgar Martin.
Kenmare	Ward	1,799	15	48.5	+8.3	85	30	19	8	0.12	-0.80	0.12	9	0	1	18	4	8	w.	Theo. E. Eckberg.
Marmarth	Slope	2,714	38	50.0	+6.8	83	29	16	8	0.95	-0.12	0.54	30	0	5	12	15	3	nw.	S. P. Grane.
Medora, 1 1/2 mi. W.	Billings	2,271	32	50.3		84	29	15	8	0.11	-1.04	0.11	9	0	1	21	6	3	w.	Harry Roberts.
Mott	Hettinger	2,424	40	50.9	+8.6	83	30	24	8	0.50	-0.72	0.40	2-3	0	2	17	9	4	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	55	51.0	+8.6	84	29 1/2	21	8	0.98	-0.22	0.45	2-3	0	10	14	14	2	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn		5	49.6		85	30	23	8	0.73		0.32	0	0	8	17	9	4	nw.	Peter F. Ficek.
Parshall	Mountrail	1,929	32	48.1	+9.1	85	30	17	8	0.34	-0.73	0.20	6-7	0	5	6	23	1	nw.	C. E. Shubert.
Portal	Burke	1,954	33	47.1	+6.5	85	30	18	8	0.37	-0.57	0.13	8-9	0.2	4	15	9	6	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	42	48.0	+8.0	82	30	17	9	0.26	-0.88	0.16	30	0	2	19	9	2	se.	E. J. Lewis.
Richardson, 1 1/2 miles N.	Stark	2,467	31	50.6	+9.2	82	30	23	8	1.28	+0.06	0.49	2-3	0	6	14	9	7	se.	Assumption Abbey.
Ryder	Ward	2,108	18							0.22	-0.90	0.15	6	0.4	3	6	19	5	.....	S. C. Schellenbaum.
Sanish	Mountrail	1,835	21	44.8	+3.1	87	30	17	8	0.40		0.26	1	0	3	8	18	4	nw.	H. J. Bugge.
Stanley	Mountrail	2,258	9	45.5		85	30	14	8	0.20	-0.95	0.08	9-10	0	4	13	13	4	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	18							T.	-0.98	T.	9	T.	0	16	8	6	sw.	Geo. N. Pilgard.
Tioja	Williams	2,279	18							0.67	-0.38	0.40	30	0	4	3	24	3	nw.	L. A. Simon.
Trotters	Golden Valley		21							0.16		0.08	6	0	5	8	19	3	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	6	49.1		86	30	17	8	0.56	-0.61	0.15	30	0	6	11	17	2	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	34	49.8	+8.4	86	30	14	8	0.37	-0.59	0.32	7	0	2	24	3	3	w.	J. C. Zeller.
Wildrose	Williams	2,258	17							0.35	-0.85	0.24	1	0	2	5	12	13	se.	Jonathan Winkler.
Williston	Williams	1,878	68	50.4	+8.4	83	29 1/2	18	8	0.48	-0.74	0.70	80	0.1	4	14	11	5	nw.	U. S. Weather Bureau.
Average for Western Division				48.9	+7.5	87	30	9	8	0.67	-0.75	2.66	3	2.4	4	14	11	5	nw.	
Average for the State				48.2	+6.6	87	30	9	8	0.67	-0.75	2.66	3	2.4	4	14	11	5	nw.	
The departures from the normal temperature are computed from the 1901-1905 average.																				

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

* Best available used for stations not equipped with recorders.

Daily Temperatures for April 1946

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Bismarck Airport	Maximum	62	56	45	58	52	50	50	49	48	54	68	70	80	62	57	44	42	34	44	40	38	42	32	40	42	32	39	30	35	51	64.9	
	Minimum	40	28	33	28	32	32	33	29	26	39	29	40	46	40	32	44	42	34	44	40	38	42	32	40	42	32	39	30	35	51	36.4	
Bottineau	Maximum	52	56	41	51	46	55	47	46	52	61	67	70	66	59	56	71	58	64	60	72	75	72	67	63	60	65	70	77	79	61.8		
	Minimum	35	26	31	26	20	29	25	18	22	29	30	40	43	30	26	35	43	25	37	33	37	31	26	35	35	31	43	33	43	49	32.2	
Carson	Maximum	55	65	45	56	50	55	52	47	40	45	64	74	74	60	60	69	66	75	68	78	70	65	72	71	73	66	68	74	81	82	64.0	
	Minimum	47	22	31	28	29	30	32	27	29	34	27	40	46	34	29	39	43	35	39	42	35	44	33	34	42	33	35	32	45	52	35.6	
Crosby	Maximum	53	52	43	55	54	61	35	48	45	57	67	69	61	56	57	70	58	74	67	72	69	62	71	69	67	68	63	70	82	85	62.0	
	Minimum	31	22	27	30	21	23	31	18	28	30	27	33	45	33	25	32	44	29	32	36	40	38	31	35	34	39	40	32	39	47	32.4	
Devils Lake	Maximum	54	44	32	45	44	47	51	42	47	46	64	69	67	56	54	70	64	61	56	74	71	66	73	67	59	60	60	70	74	80	58.9	
	Minimum	34	32	29	29	31	26	30	25	22	34	35	41	40	35	30	41	40	34	38	36	42	42	38	41	38	30	41	36	39	51	35.3	
Dickinson Airport	Maximum	57	56	40	58	52	63	52	48	47	51	64	73	76	61	60	70	67	76	66	75	70	65	69	70	69	67	62	72	81	82	64.0	
	Minimum	36	22	34	31	30	33	28	24	28	28	30	40	45	33	29	43	40	36	42	40	37	38	34	35	37	37	40	37	43	45	35.2	
Dunn Center	Maximum	59	56	44	60	54	63	45	51	45	56	66	73	77	61	57	73	67	77	66	76	71	67	69	70	69	69	65	71	82	85	64.8	
	Minimum	38	23	24	29	31	30	31	20	22	27	24	31	43	31	33	34	42	29	38	40	36	41	30	34	33	34	40	26	30	40	32.1	
Fargo Airport	Maximum	56	46	35	36	40	43	55	43	49	50	55	73	73	60	53	73	72	59	56	72	78	66	72	69	62	58	55	73	76	82	59.7	
	Minimum	37	34	29	27	27	23	33	29	26	32	37	40	38	40	35	36	36	31	37	34	51	43	33	42	37	26	37	32	34	55	35.0	
Fessenden	Maximum	58	55	45	49	49	46	48	47	50	49	64	72	71	68	57	73	69	64	61	75	72	67	74	70	64	64	61	72	80	83	62.6	
	Minimum	36	31	29	21	30	27	31	24	21	34	29	42	38	28	25	40	43	32	37	33	40	45	34	37	43	48	42	35	37	47	35.0	
Fullerton	Maximum	67	55	48	42	40	45	54	48	52	47	60	76	74	66	58	76	75	64	63	76	78	66	72	72	69	67	68	71	77	81	63.4	
	Minimum	40	33	29	28	32	20	35	29	24	35	37	40	41	43	30	34	43	34	42	37	47	51	34	45	45	27	34	36	48	46	36.6	
Garrison	Maximum	60	54	41	60	52	57	44	50	46	58	66	72	76	60	58	75	66	68	64	74	71	66	72	71	70	66	66	72	81	85	64.0	
	Minimum	36	24	34	25	30	29	31	20	24	37	26	40	39	32	24	39	43	35	39	36	37	42	32	35	40	28	41	30	37	46	33.7	
Golva	Maximum	55	56	48	59	52	70	51	50	46	50	64	73	70	60	64	72	65	80	68	72	70	62	67	70	71	72	63	71	81	75	64.2	
	Minimum	37	20	35	30	32	33	17	9	27	26	29	42	37	29	23	42	30	30	31	37	34	34	29	32	28	40	32	26	28	40	30.6	
Grafton	Maximum	52	51	42	44	46	48	56	48	48	46	63	70	69	65	56	69	69	58	57	72	76	73	75	74	67	60	59	72	73	84	61.4	
	Minimum	34	33	28	30	31	33	35	26	21	32	38	40	37	41	32	38	41	32	39	32	47	45	33	47	37	24	30	27	31	48	34.7	
Grand Forks Airport	Maximum	52	42	34	38	43	45	56	43	47	46	58	70	70	58	53	71	70	59	57	70	76	70	75	69	61	60	52	73	73	84	59.2	
	Minimum	34	32	29	25	30	27	31	25	22	32	38	40	37	36	31	38	33	31	33	31	42	38	31	37	31	23	34	30	31	52	32.8	
Jamestown Airport	Maximum	61	59	35	38	46	38	53	49	50	41	62	75	73	60	54	75	70	62	61	77	74	67	72	71	65	61	62	73	76	81	61.4	
	Minimum	37	33	28	28	25	21	32	27	21	34	38	40	38	36	30	39	36	31	36	36	44	41	31	40	38	27	40	32	32	50	34.0	
Kenmare	Maximum	54	54	43	57	53	58	41	48	49	61	66	72	68	56	57	74	61	68	61	71	70	65	72	70	68	66	65	72	80	85	62.8	
	Minimum	31	25	30	25	24	26	25	19	21	28	32	41	43	33	25	30	45	31	35	39	43	42	39	40	35	37	45	40	38	45	34.2	
Langdon	Maximum	48	47	40	46	47	49	49	47	44	43	63	73	68	62	56	72	66	57	61	68	74	71	73	70	70	67	59	62	74	72	82	60.3
	Minimum	31	29	27	27	25	26	33	21	20	31	32	38	38	36	26	36	41	26	35	29	36	44	29	35	31	25	34	30	33	47	31.8	
Marmarth	Maximum	55	59	49	61	53	70	55	52	48	50	64	76	76	63	65	74	70	82	71	63	70	64	70	75	68	73	68	74	83	79	66.0	
	Minimum	42	25	29	23	35	35	30	16	33	27	23	32	45	35	27	45	40	45	35	43	33	35	35	31	33	45	35	28	32	47	34.0	
Minot Airport	Maximum	56	51	42	57	49	54	44	48	48	58	66	70	72	55	55	71	62	67	60	73	69	65	71	69	65	64	64	70	80	82	61.9	
	Minimum	34	27	30	26	26	25	30	22	24	38	31	48	40	33	27	44	38	33	38	36	44	42	39	39	38	35	41	39	39	48	35.0	
Mott	Maximum	60	58	57	60	56	66	64	50	46	52	66	73	77	70	70	74	72	78	76	77	68	65	67	70	70	68	64	75	82	83	67.1	
	Minimum	37	25	32	31	31	32	35	24	30	36	25	36	37	35	27	34	40	32	40	39	40	39	34	39	36	41	39	28	36	51	34.7	
Pembina Airport	Maximum	46	36	34	45	42	47	51	38	42	43	61	66	64	56	57	65	64	57	54	65	72	66	73	63	55	61	55	68	74	78	56.6	
	Minimum	32	26	29	29	30	28	28	20	22	31	38	40	35	35	31	33	37	34	35	32	46	40	36	44	32	27	32	30	35	46	33.1	
Sharon	Maximum	53	49	40	38	51	43	45	55	41	43	61	75	65	59	54	72	68	60	58	69	74	69	73	69	61	59	57	73	73	81	59.6	
	Minimum	34	31	28	24	20	24	32	24	19	32	38	40	38	40	30	48	38	28	40	30	44	48	30	39	37	27	30	33	39	49	34.1	
Steele	Maximum	60	56	45	43	48	48	52	46	49	49	62	74	75	71	55	74	70	63	61	79	71	66	71	69	67	62	64	72	78	80	62.7	
	Minimum	38	26	30	22	31	25	35	27	24	35	27	39	45	39	28	40	42	29	42	37	42	49	29	38	41	28	43	30	35	52	34.9	
Valley City	Maximum	59	58	48	43	47	42	58	49	50	45	61	72	72	70	58	75	73	61	61	73	78	70	74	72	66	62	60	75	77	82	63.0	
	Minimum	38	34	31	27	32	22	35	29	23	34	38	42	38	43	33	39	40	35	39	37	47	49	82	44	45	29	46	33	37	52	36.8	
Wahpeton	Maximum	59	59	48	41	45	44	58	56	51	50	54	75	74	73	59	75	78	64	62	70	80	79	72	71	68	60	59	73	77	82	63.9	
	Minimum	39	33	31	26	31	25	37	30	23	32	33	38	36	34	34	34	34	31	42	35	53	49	43	43	39	26	37	32	33	55	35.6	
Williston	Maximum	58	52	50	56	53	66	44	50	46	56	67	72	71	58	60	71	61	77	65	73	68	62	69	70	71	63	71	83	83	63.9		
	Minimum	34	27	35	31	39	24	18	32	31	27	31	46	41	34	36	46	41	34	40	49	45	41	38	36	35	45	45	37</				

CLIMATOLOGICAL DATA: NORTH DAKOTA SECTION

APRIL 1946

Daily Precipitation for April 1946

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
<i>Eastern Division</i>																																		
Carrington ²	James				.52							T.				.08		T.						.12									0.72	
Casselton	Red.															.19								.10									1.67	
Cooperstown	Sheyenne	T.		.24	T.							T.																					0.53	
Courtenay	James																																0.54	
Devils Lake ^{1 5}	Devils Lake	.04	T.	.05	T.			T.	T.			T.			.09		.02																0.23	
Edgeley	James																																0.84	
Edmore	Devils Lake	.10																															0.57	
Ellendale	James			1.34																													1.67	
Fargo ^{1 5}	Red.			.73	T.	T.			.04																								1.10	
Forman	Sheyenne			.98																													1.23	
Fullerton	James			2.06																													2.34	
Gackle	do																																0.43	
Grafton	Red.			.06	.03	.07	T.																										0.28	
Grand Forks Airport ³	do	T.	T.	.19	T.										.01																		1.33	
Hankinson ²	do			.50	.61																												0.57	
Hannah	Pembina	.15																															1.05	
Hillsboro	Red.			.75				T.																									1.15	
Jamestown Airport ³	James	T.	T.																														0.66	
Langdon	Pembina	.10		T.	.01				.35																								0.25	
Larimore	Red.			.23	1.53	T.	.05	.01																									2.56	
Lisbon	Sheyenne			.35	.16																												0.81	
Mayville	Red.	.01	.01																														0.68	
McHenry	James	.02		.50	.01																												1.43	
McLeod	Sheyenne	.02		.70	.10	.05																											1.97	
Oakes ²	James			.45	1.07				.04																								0.65	
Park River	Red.			.04	T.																												0.71	
Pembina Airport ³	do	.31	T.	.04	T.				.05																								0.43	
Petersburg	do	.04	.01	.09	.04																												0.41	
Sharon	do			.35	T.																												2.28	
Valley City	Sheyenne			1.80	.02																												1.44	
Wahpetou	Red.			.96	T.	T.																											0.97	
<i>Middle Division</i>																																		
Ashley ³	Missouri			.79			T.	T.	T.																									0.46
Bisbee	Devils Lake								.25																								1.04	
Bismarck Airport ^{1 5}	Missouri	T.		.60	T.	.07	.14																										0.14	
Bottineau ²	Mouse		.02																														0.23	
Butte	do	.09		.05																													1.21	
Carson	Heart			.54	.01	.09																											0.64	
Center	Missouri			.35																													0.58	
Drake ²	Mouse	.29		.35																													0.03	
Dunseith	do																																0.21	
Eckman	do																																0.24	
Fessenden	James			.11																													1.67	
Fort Yates	Missouri			1.00																													0.17	
Foxholm	Mouse	.04	T.	T.					.01																								0.22	
Garrison ³	Missouri	.02		.10																													0.37	
Granville	Mouse	.03																															0.25	
Hansboro	Devils Lake	.03			.02																												1.61	
Linton	Missouri			.91	T.				.05																								0.18	
Maple Creek	Sheyenne	.07		.02	T.																												0.42	
New Salem	Heart			.50	.10	T.																											1.31	
Pettibone	James			.38		.11	T.																										0.61	
Rolla	Devils Lake	.03	T.	.67	.02																												0.88	
Rugby	Mouse			.03					.01																								0.39	
Selfridge	Missouri			.80					.08																								0.19	
Steele	do	.07		.61	T.	.10			.25																								1.85	
Towner	Mouse								.11																								1.18	
Turtle Lake	Missouri	.08		.08	.04				.32																								0.42	
Tuttle	do	.03		.09	.03				.08																								0.25	
Underwood	do			.12																													0.45	
Velva	Mouse	T.																															0.12	
Washburn	Missouri			T.																													0.10	
Westhope	Mouse								.15																								0.02	
Willow City	do	T.			T.				.02																								0.27	
Wishek ²	Missouri			.54	.20	T.			.02																								0.37	
<i>Western Division</i>																																		
Alpha	Lit. Missouri			.16			T.																										0.98	
Amidon	do			.28			.05		.20																								0.73	
Bowman ²	Grand			.34		.04																											0.72	
Crosby ²	Mouse	.16																															0.70	
Dickinson Airport ³	Heart	T.	.04	.39	.02	.01	T.																										0.39	
Dunn Center	Knife			.11	.20																												1.19	
Elbowoods	Missouri	.06		.09																													0.58	
Fairfield	Lit. Missouri	.10		T.					.04				</																					

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UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LV BISMARCK, N. D., MAY 1946 No. 5

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

The first three weeks of May were unusually cold, with freezing temperatures on many days between the 5th and 15th. Most stations reported readings below 20° on the morning of the 12th. Precipitation was mostly light, but heavy showers occurred at some places, mostly in the east and southwest portions. The heaviest showers occurred on the 30th and 31st. The precipitation was very light over the north-central and extreme southeast portions where the total amount was less than one inch. No severe storms were reported, although thunderstorms were general on the 30th and also occurred on the 13th, 16th, 19th, 20th, 21st, 22d, and 29th. Crops were well advanced at the beginning of the month due to the warm weather during April, but much damage was done by frosts during May. Fruit was severely damaged. Much early planted flax and sugar beets had to be replanted. Small grain was also frozen but generally made a good recovery. Flax and corn were nearly all planted by the close of the month. The outlook was for a near normal small grain crop. Pastures are short and the hay crop will not be sufficient in many sections for the large number of livestock.

TEMPERATURE

The mean temperature for the state was 50.6°, or 2.9° below the 1892-1946 average for May. The mean temperature for the eastern division was 51.2°; for the middle division, 50.6°; and for the western division, 50.0°. The highest mean temperature was 53.5° at Wahpeton, and the lowest, 47.6° at Golva and Sanish, making a range in mean temperature of 5.9°. The absolute range was 78°, from 88° at Arvilla on the 26th and Grafton on the 28th, to 10° at Belcourt on the 12th. The average daily excess in temperature for the state since January 1, 1946, is 3.9°.

PRECIPITATION

The average precipitation for the state was 1.60 inches, or 0.70 inch less than the 1892-1946 average for May. In the eastern division the average amount was 1.61 inches; in the middle division, 1.38 inches; and in the western division, 1.82 inches. The greatest monthly amount reported was 3.94 inches at Selfridge; the least, 0.20 inch at Minot Airport. The greatest amount recorded in any 24 consecutive hours was 1.84 inches at Fessenden and Rolla on the 30th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 1.33 inches. The average snowfall was 0.6 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.39	7	29.50	12	13.2	35	s.	28	66	76	53	45	53	432
Devils Lake....	30.34	7	29.54	12	9.6	26	n.	9	70	78	50	47	54	452
Fargo.....	30.28	7	29.52	13	13.0	33	s.	28	72	80	55	54	51	432
Williston.....	30.36	7	29.47	12	7.9	26	nw.	9	68	76	48	44	54	447

† And other dates.

COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	46.6	96	13	3.43	1.84	1.33	2.20	3.9	12	6	8	17	
1893...	52.2	97	19	1.29	1.14	2.40	1.61	0.2	6	11	8	12	
1894...	54.6	98	23	1.40	1.24	1.88	1.51	0.0	5	16	9	6	
1895...	54.4	101	15	2.60	2.88	2.57	2.48	0.0	8	10	11	10	
1896...	56.9	103	22	5.44	3.70	5.81	4.95	0.0	13	6	14	11	
1897...	55.4	97	16	0.85	0.61	0.60	0.67	T.	4	16	10	5	
1898...	52.7	92	14	1.95	1.84	2.15	1.98	0.0	5	15	9	7	
1899...	50.6	91	16	3.40	4.80	2.27	3.49	0.4	8	9	9	13	
1900...	59.2	106	15	0.78	0.70	0.59	0.69	0.0	3	18	8	5	
1901...	60.0	99	19	0.35	0.24	0.33	0.31	T.	2	21	4	6	
1902...	55.9	94	24	4.31	3.33	3.06	3.57	0.4	10	13	6	12	
1903...	54.3	96	11	2.52	3.35	3.06	3.12	T.	4	14	6	8	
1904...	54.2	93	20	2.05	1.64	1.10	1.60	T.	6	14	9	8	
1905...	50.1	88	10	4.24	2.78	1.72	2.91	4.0	8	12	8	11	
1906...	50.8	99	11	4.41	4.74	5.59	4.91	0.4	12	9	8	14	
1907...	44.0	84	6	1.52	1.02	1.39	1.31	3.1	6	12	10	9	
1908...	50.8	88	9	3.54	2.58	2.57	2.90	0.9	8	13	7	11	
1909...	51.0	88	5	4.78	3.92	4.65	4.46	0.1	10	12	9	10	
1910...	50.7	94	10	0.86	0.95	1.28	1.03	0.1	6	12	11	8	
1911...	55.0	99	6	4.06	2.25	2.39	2.90	T.	8	14	9	8	
1912...	54.2	90	16	4.17	4.59	4.42	4.39	0.7	11	10	10	11	
1913...	51.2	100	11	1.75	1.63	1.74	1.71	0.2	9	10	10	11	
1914...	55.2	95	16	1.83	2.56	1.98	2.12	1.0	8	16	8	7	
1915...	51.1	98	15	3.37	3.21	2.81	3.13	0.4	9	10	10	11	
1916...	51.0	95	7	2.95	1.70	1.64	2.10	0.3	8	11	11	9	
1917...	51.2	98	15	0.21	0.29	0.53	0.34	0.1	2	20	7	4	
1918...	51.7	99	6	2.58	2.40	1.83	2.27	0.5	9	10	11	10	
1919...	55.5	101	16	4.29	3.14	1.91	3.11	0.4	9	16	8	7	
1920...	53.9	89	20	2.40	1.34	1.54	1.76	0.1	7	13	10	8	
1921...	53.8	90	21	2.75	2.22	2.36	2.44	T.	9	13	10	8	
1922...	56.3	93	24	4.29	2.81	3.08	3.39	0.1	12	10	11	10	
1923...	54.1	100	13	2.56	1.57	1.17	1.77	0.2	6	15	10	6	
1924...	46.9	84	15	1.05	0.57	0.81	0.81	0.0	5	12	10	9	
1925...	53.6	111	10	1.94	1.17	1.22	1.44	T.	4	17	9	5	
1926...	58.5	105	10	2.07	2.09	2.45	2.20	0.0	7	13	11	7	
1927...	48.0	87	13	5.21	6.06	5.77	5.68	3.2	14	6	8	17	
1928...	58.2	107	16	1.02	1.23	1.00	1.08	0.0	5	18	7	6	
1929...	49.1	92	8	2.00	2.69	4.28	2.99	0.4	7	16	9	6	
1930...	50.8	98	18	3.76	2.40	1.69	2.62	0.7	9	12	8	11	
1931...	53.1	100	10	2.17	1.09	0.98	1.41	0.3	6	16	7	8	
1932...	55.9	98	25	2.66	2.02	1.76	2.15	2.2	6	13	9	9	
1933...	54.8	98	19	2.78	3.18	3.50	3.15	T.	9	9	10	12	
1934...	63.6	111	18	0.46	0.32	0.29	0.36	0.0	3	17	10	4	
1935...	49.5	89	20	2.11	2.93	2.79	2.61	1.5	12	6	11	14	
1936...	61.0	100	20	1.05	0.66	0.70	0.80	T.	4	19	9	3	
1937...	56.9	99	19	2.35	1.67	1.27	1.76	T.	7	12	11	8	
1938...	52.0	88	18	2.93	2.07	2.66	2.55	0.2	11	8	12	11	
1939...	60.1	104	18	1.33	1.60	1.71	1.55	0	8	13	11	7	
1940...	54.9	96	17	1.60	2.26	2.06	1.97	0.1	8	14	11	6	
1941...	58.3	98	21	2.23	3.12	3.48	2.94	T.	12	10	10	11	
1942...	50.0	87	19	3.87	2.94	2.27	3.03	0.5	11	9	9	13	
1943...	49.9	96	15	2.72	2.25	1.66	2.21	1.0	9	8	10	13	
1944...	58.2	95	11	3.33	2.64	2.22	2.73	0.1	11	11	12	8	
1945...	47.7	84	10	1.60	1.42	1.61	1.54	0.5	8	10	11	10	
1946...	50.6	88	10	1.61	1.38	1.82	1.60	0.6	9	9	11	11	
Period	53.5	111	5	2.51	2.20	2.18	2.30	0.5	8	13	9	9	

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Climatological Data for May 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	52.3	.....	89	28	11	12	1.86	.....	0.56	31	0.5	12	17	9	5	nw.	Albert Thoren.
Carrington	Foster	1,579	49	50.6	-2.5	84	25	18	12	1.97	-0.52	0.49	21-22	T.	12	10	6	15	.....	Soo Line Agent.
Casselton	Cass	934	51	.....	.....	87	28	.....	12	2.94	+0.14	1.69	30-31	0.5	8	13	15	3	s.	Joseph L. Farrell.
Cavalier	Pembina	894	39	52.3	.....	87	26	16	12	0.99	-1.27	0.35	14	T.	4	8	18	5	s.	City Light & Power Co.
Colgate	Steele	1,180	13	.....	.....	.....	.....	.....	.....	2.25	-0.45	0.59	30-31	1.0	9	11	14	6	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	50.7	-3.1	82	27	13	12	1.84	-0.69	0.68	30-31	0	10	6	10	15	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	16	.....	.....	.....	.....	.....	.....	1.75	-0.68	0.44	14	1.0	11	6	14	11	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,478	71	50.9	-1.7	83	26	20	12	0.92	-1.11	0.17	11	5.5	10	4	10	17	n.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	51.1	-3.3	81	28	14	12	1.04	-1.52	0.26	19	0	9	9	16	6	ne.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	48.8	-4.4	82	28	15	12	1.67	-0.19	0.65	30-31	0.5	11	16	4	11	n.	Mike Davis.
Ellendale	Dickey	1,457	48	51.3	-4.0	84	28	17	11	1.11	-1.50	0.23	19	0	8	12	7	12	ne.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	51.8	-3.3	86	28	17	12	2.04	-0.85	1.12	30-31	0.5	11	4	11	16	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	52.0	-3.7	82	28	18	12	0.78	-2.17	0.24	17	0	8	12	15	4	n.	Helge Dyste.
Fullerton	Dickey	1,439	49	52.4	-2.4	84	28	16	12	0.90	-2.09	0.21	17	T.	8	11	10	10	nw.	F. O. Alin.
Gackle	Logan	1,951	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Walter Kranzler.
Grafton	Walsh	827	55	53.0	-1.1	88	28	15	12	1.29	-0.73	0.43	14	3.0	8	10	9	12	n.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	52.0	-2.2	86	28	22	12	2.03	-0.47	0.54	14	1.0	11	7	11	13	nw.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	6	51.0	.....	87	28	18	12	1.68	.....	0.46	14	T.	10	5	6	20	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	51.9	-6.1	86	28	16	11	0.81	-2.05	0.19	14	0	9	12	6	13	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	53	49.7	-1.9	83	24	17	12	1.70	-0.41	0.65	30	2.3	7	1	27	3	nw.	A. E. Prior.
Hillsboro	Trail	901	41	52.6	-2.2	85	28	19	11	2.71	-0.24	0.76	30	T.	10	8	10	13	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	51.0	-3.1	85	28	12	12	1.37	-1.40	0.32	13-14	T.	9	9	12	10	ne.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	6	49.9	.....	83	28	12	12	1.47	.....	0.68	30-31	T.	11	5	7	19	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	49.9	.....	82	26	11	12	1.53	.....	0.50	14	0	10	11	6	14	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	50.7	-1.1	83	28	15	12	0.97	-1.02	0.28	17	1.5	10	11	10	10	nw.	V. Sturlanson.
Larimore	Grand Forks	1,134	54	51.6	-1.8	85	28	16	11	1.56	-1.17	0.40	14	1.0	10	8	8	15	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	50.5	-4.3	84	28	14	12	0.73	-2.04	0.17	17	0	10	16	4	11	nw.	J. O. Halverson.
Mayville	Trail	975	51	53.2	-2.2	85	28	19	11	2.78	+0.06	0.88	22	1.0	12	6	10	15	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	50.0	-2.7	82	27	12	12	2.20	-0.11	0.49	30-31	8.5	12	8	11	12	s.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	51.6	-4.2	86	28	15	11	1.16	-1.85	0.47	30	0.5	10	14	10	7	n.	J. G. Carlson.
McVile	Nelson	1,467	5	.....	.....	.....	.....	.....	.....	2.14	.....	0.48	22	T.	9	6	14	11	nw.	C. W. McMillan.
Oakes	Dickey	1,318	18	52.4	-3.2	87	28	16	12	1.08	-1.63	0.48	31	0	8	9	13	9	se.	H. M. Blazer.
Park River	Walsh	998	43	50.2	-3.4	85	28	15	11	1.76	-0.18	0.40	3	2.5	11	15	5	11	n.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	50.4	-2.8	86	26	17	12	1.12	-1.07	0.48	30-31	T.	9	4	12	15	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	50.4	.....	84	28	18	12	1.69	-0.75	0.59	3	2.0	10	11	11	9	nw.	T. C. Overland.
Sharon	Steele	1,516	23	51.4	-2.7	84	28	16	12	1.90	-0.84	0.53	22	1.5	10	12	9	10	ne.	Nels O. Gresham.
Valley City	Barnes	1,229	42	52.6	-2.0	85	28	15	12	2.95	+0.17	1.16	30-31	T.	13	10	8	13	n.	Hettie Blythe.
Wahpeton	Richland	962	55	53.5	-2.8	85	28	16	12	0.82	-1.88	0.24	30	T.	11	9	10	12	se.	State School of Science.
Average for Eastern Division				51.2	-3.1	88	26	11	12	1.61	-0.90	1.69	30-31	0.9	10	10	10	11	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	49.2	-5.0	82	28	13	11	1.68	-0.72	0.92	22-23	T.	7	5	11	15	nw.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,900	2	49.4	.....	86	28	10	12	1.41	.....	1.30	30	0.1	6	6	16	10	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	51.3	-1.4	85	28	16	11	0.67	-1.48	0.22	10	1.0	6	9	4	18	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	51.6	-3.2	80	26	25	12	2.20	-0.03	0.63	30-31	1.2	9	5	7	19	ne.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	7	51.6	-1.4	82	26	25	7	1.93	-0.39	0.56	30-31	1.2	9	5	7	19	ne.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	50.9	-1.4	85	25	19	12	0.59	-1.46	0.37	30-31	0.5	7	12	11	8	ne.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	51.3	-3.5	83	28	18	11	0.55	-1.93	0.20	19	T.	6	7	8	16	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	50.0	-4.5	80	26	19	12	2.67	+0.27	0.52	31	1.4	11	10	9	12	nw.	J. W. Evans.
Center	Oliver	2,100	9	49.2	.....	82	25	19	12	2.40	.....	1.22	30-31	T.	12	6	17	8	nw.	Fred L. Heinz.
Drake	McHenry	1,634	17	51.1	-3.6	83	25	17	12	0.43	-1.65	0.15	14	T.	7	17	13	1	n.	Geo. A. Paulus.
Dunsmuir, 2 miles NNE	Rolette	1,682	51	50.8	-2.0	86	28	18	12	0.97	-0.90	0.64	30	0.3	5	5	18	8	ne.	State Tuberculosis San.
Eckman	Bottineau	1,500	41	49.2	-3.4	85	28	19	12	0.79	-1.19	0.47	30	0.1	8	4	14	13	nw.	E. R. Sherman.
Fessenden	Wells	1,610	35	51.1	-2.2	84	25	23	10	1.62	+0.34	1.84	29-30	0.7	8	8	11	12	n.	John V. Zuber.
Fort Yates	Sioux	1,670	47	51.7	-5.0	79	22	21	11	1.99	-0.17	0.75	30	T.	6	11	11	9	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,657	26	52.2	-2.0	86	26	21	12	1.36	-0.67	0.66	30	T.	9	11	6	14	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	50.6	-3.0	83	25	24	11	0.82	-1.51	0.58	30	0.2	7	5	8	18	n.	Mae H. Vorachek.
Granville	McHenry	1,504	40	51.3	-1.6	86	25	17	12	0.27	-1.76	0.13	30	0.1	7	15	9	7	nw.	Fred Rohle.
Hansboro	Towner	1,597	39	48.9	-2.6	87	28	15	12	0.62	-1.48	0.31	30	1.0	7	10	11	10	nw.	W. E. Dishor.
Harvey, 3 miles SE	Wells	1,596	44	.....	.....	.....	.....	.....	.....	0.53	-1.65	0.24	16-17	0.1	9	13	8	10	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	51.5	.....	85	25	19	12	0.87	.....	0.27	6	0	8	4	16	11	w.	John Duhage.
Linton	Emmons	1,711	30	52.6	-3.1	81	26	22	7	1.37	-0.92	0.35	14	0	8	9	3	19	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	51.6	-2.2	86	28	17	12	0.70	-1.35	0.24	19	1.2	7	5	15	11	ne.</	

Climatological Data for May 1946-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	54	50.8	-3.8	86	26	16	7	1.01	-1.18	0.30	18-19	T.	8	11	13	7	nw.	H. W. Case.
Epping	Williams	2,224	38	50.6	-4.4	86	26	19	11	1.94	-0.20	0.49	30	0	9	19	10	2	nw.	T. Beachler.
Fairfield, 94 miles N	Billings	2,650	18							1.35	-1.01	0.53	18-19	T.	9	9	12	10	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	29			83	26	17	10	2.20	-0.15	0.57	19	T.	8	6	14	11	n.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	6	47.6	-5.4	84	26	18	10	2.01	-0.25	0.65	30-31	T.	6	5	8	18	nw.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	38	50.9	-1.3	84	27	16	10	1.16	-1.06	0.45	30-31	0	7	12	12	7	se.	L. D. Nielson.
Halliday	Dunn	2,073	5							1.64		0.52	18	T.	6	6	15	10	nw.	John Kisse.
Hettinger	Adams	2,675	40	50.8	-3.7	80	25	22	7	3.51	-1.23	0.90	29-30	0	12	9	11	11	n.	Edgar Martin.
Kenmare	Ward	1,799	15	50.8	-3.1	86	28	23	11	0.62	-1.36	0.35	31	0.3	7	12	9	10	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	38	51.9	-1.7	82	25	23	10	2.99	+0.70	0.75	18	0	11	8	10	13	nw.	S. P. Grane.
Medora, 1 1/2 mi. W	Billings	2,271	32	52.2		86	27	18	7	2.27	+0.09	0.62	18-19	0	8	12	12	7	se.	Harry Roberts.
Mott	Hettinger	2,424	40	50.0	-4.6	79	27	24	10	1.78	-0.48	0.52	19	T.	7	5	14	12	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	55	50.5	-2.7	83	26	22	10	2.46	+0.29	0.85	30-31	T.	9	5	15	11	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn	1,929	32	50.0		82	26	18	10	1.66		0.47	19	0	8	11	11	9	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	32	50.2	-3.8	84	28	17	7	1.86	-0.31	0.87	16	T.	11	5	22	4	nw.	C. E. Shubert.
Portal	Burke	1,954	33	48.8	-3.3	86	28	15	11	0.99	-1.08	0.40	17-18	1.5	10	6	15	10	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	42	49.6	-3.9	83	26	21	11	0.96	-1.19	0.66	30-31	0.5	8	11	11	9	nw.	E. J. Lewis.
Richardson, 1 1/2 miles N	Stark	2,467	31	49.6	-4.3	80	26	21	12	2.59	+0.13	1.06	30-31	T.	6	8	9	14	nw.	Assumption Abbey.
Ryder	Ward	2,108	18							1.46		0.71	18-19	T.	4	4	22	5	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	21	47.6	-7.6	87	27	18	7	1.94	-0.01	0.77	30	0	9	3	21	7		H. J. Bugge.
Stanley	Mountrail	2,258	9	46.7		85	28	18	11	2.10		0.86	16	0.4	7	8	12	11	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	18							1.14	-0.85	0.57	30	0.2	8	8	14	9	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	18							1.32	-0.74	0.69	30	0	5	2	13	16	nw.	L. A. Simon.
Trotters	Golden Valley	2,108	21							1.46	-0.77	0.71	18-19	T.	4	4	22	5	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	6	50.8		85	26	18	7	1.45		0.65	30	0	7	7	17	7	n.	H. Glenn Sims.
Watford City	McKenzie	2,084	34	50.5	-4.0	86	26	19	11	1.73	-0.26	0.41	31	0	7	5	20	6	n.	J. C. Zeller.
Wildrose	Williams	2,258	17							1.35	-0.55	0.48	16	0	7	20	8	3	nw.	Jonathan Winkler.
Williston	Williams	1,878	68	51.0	-3.0	85	26	23	11	1.53	-0.53	0.54	30-31	T.	11	5	8	18	n.	U. S. Weather Bureau.
Average for Western Division				50.0	-3.7	87	26	15	11	1.82	-0.36	1.06	30-31	0.1	8	9	12	10	nw.	
Average for the State				50.6	-2.9	88	26	10	12	1.60	-0.70	1.84	29-30	0.6	9	9	11	11	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for May 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	74	71	64	54	53	44	62	64	62	40	45	62	63	49	57	52	59	50	51	60	71	76	59	64	73	77	76	82	79	74	54	62.0	
	Minimum	50	43	38	36	30	25	28	33	30	16	13	13	42	26	26	43	36	31	38	37	39	48	46	38	33	44	50	56	56	50	35	36.4	
Bismarck Airport	Maximum	75	73	60	57	55	48	65	66	53	43	40	69	60	48	54	50	64	54	56	64	73	71	69	68	78	82	80	86	77	68	57	63.2	
	Minimum	51	46	41	36	31	28	25	31	34	29	25	27	38	32	37	44	39	36	38	37	40	51	46	39	36	46	59	60	60	53	41	39.9	
Bottineau	Maximum	79	72	56	48	41	46	65	62	50	40	60	65	53	48	58	67	62	64	65	69	75	72	62	70	85	83	86	80	85	81	80	54	64.4
	Minimum	50	48	38	34	30	29	25	40	33	24	24	19	27	24	24	35	43	39	43	41	32	52	35	33	38	44	49	58	57	49	36	37.7	
Carson	Maximum	70	75	60	59	50	52	65	70	52	45	48	71	63	52	53	50	69	59	57	67	71	71	67	68	76	80	78	77	74	60	57	63.4	
	Minimum	41	41	33	35	30	28	25	31	35	25	24	19	35	30	32	40	34	41	38	33	34	45	43	31	37	43	55	58	52	47	36	36.5	
Crosby	Maximum	61	71	50	52	47	48	65	65	43	46	47	69	50	43	64	62	59	49	62	67	71	71	65	75	83	87	83	86	80	75	45	62.6	
	Minimum	39	39	38	34	34	28	24	32	34	23	18	25	24	30	23	38	36	36	40	37	38	50	33	31	44	40	58	58	57	39	39	36.1	
Devils Lake	Maximum	79	71	58	47	43	46	62	60	49	37	32	63	56	43	56	63	58	52	60	64	74	73	65	66	82	83	83	82	80	52	62.0		
	Minimum	48	50	41	38	33	33	29	40	26	24	23	20	33	32	28	40	43	41	43	40	44	49	41	37	43	53	51	62	57	51	39	39.8	
Dickinson Airport	Maximum	59	64	56	56	53	44	61	65	47	42	44	72	54	44	60	65	67	47	53	63	71	68	60	64	75	82	81	78	70	55	60.5		
	Minimum	41	40	37	37	34	31	26	36	31	19	26	27	33	32	34	35	38	40	40	35	39	44	40	29	43	44	59	59	52	46	38	37.6	
Dunn Center	Maximum	65	68	56	54	54	46	63	65	47	42	47	74	55	39	60	68	67	52	55	64	72	73	65	68	79	84	82	84	73	58	46	62.1	
	Minimum	41	41	40	36	36	30	23	30	37	26	25	25	30	33	34	30	39	42	41	37	35	46	41	30	39	40	50	59	57	48	45	37.6	
Fargo Airport	Maximum	80	78	61	51	46	48	61	60	64	36	35	58	64	48	56	64	57	55	53	65	76	69	62	67	77	82	84	86	82	75	61	63.3	
	Minimum	50	46	42	42	35	36	33	37	33	22	19	17	40	32	26	39	38	37	43	37	39	54	52	45	36	45	51	63	61	59	36	40.2	
Fessenden	Maximum	80	75	65	52	48	40	65	62	58	45	35	65	59	52	53	55	65	58	59	60	74	70	67	67	84	83	84	83	81	79	70	64.3	
	Minimum	45	41	39	36	35	28	25	35	36	23	23	27	30	31	27	37	43	40	42	35	39	49	40	32	38	47	55	59	53	51	33	37.9	
Fullerton	Maximum	79	74	67	56	53	46	63	65	64	48	49	62	67	60	62	63	68	55	55	64	74	79	65	68	78	80	80	84	81	80	57	65.8	
	Minimum	48	41	40	39	35	24	30	37	32	24	19	16	40	35	27	42	45	35	43	38	41	53	49	41	35	41	46	57	58	56	40	38.9	
Garrison	Maximum	75	72	58	50	53	49	65	66	48	43	45	71	57	44	54	61	63	60	63	66	76	77	68	71	83	83	77	77	77	70	57	64.0	
	Minimum	41	45	38	33	29	28	25	33	32	25	24	26	29	32	32	35	40	34	40	36	36	50	39	29	38	44	56	59	58	47	39	37.2	
Golva	Maximum	50	64	53	57	49	45	61	67	46	45	52	75	54	43	64	67	75	49	54	65	73	72	62	66	74	84	79	77	68	52	49	61.0	
	Minimum	37	36	34	27	30	24	22	30	25	18	24	27	30	31	33	30	34	41	39	35	32	44	36	26	36	42	56	57	44	45	37	34.3	
Grafton	Maximum	83	80	69	51	48	53	65	65	60	53	39	54	57	56	56	62	61	55	59	67	77	76	69	69	80	86	84	88	85	83	72	66.5	
	Minimum	48	45	45	47	34	25	31	42	28	28	18	15	35	32	27	39	45	39	44	40	38	49	42	38	34	43	47	62	60	54	40	39.6	
Grand Forks Airport	Maximum	81	77	63	52	44	51	65	61	64	36	38	56	57	41	57	62	54	56	60	66	76	65	65	68	80	84	85	87	82	80	54	63.5	
	Minimum	49	44	42	39	35	34	30	32	29	22	20	18	36	30	27	41	45	41	38	34	38	50	46	38	33	47	50	63	59	53	33	38.6	
Jamestown Airport	Maximum	79	76	56	53	47	45	63	62	60	39	45	63	61	43	56	59	62	50	58	64	75	67	67	66	78	82	82	83	81	69	56	62.8	
	Minimum	47	40	41	35	27	25	29	37	31	17	16	12	37	30	26	36	40	36	38	36	41	52	45	39	34	40	49	59	58	55	38	37.0	
Kenmare	Maximum	68	73	54	54	46	45	67	65	46	41	45	70	50	46	59	67	62	58	65	69	73	73	63	75	83	85	79	86	78	78	50	63.6	
	Minimum	40	41	40	34	32	27	29	33	37	25	23	26	28	31	29	38	40	36	41	40	44	50	36	29	46	48	58	55	57	46	38	38.0	
Langdon	Maximum	80	77	65	56	44	56	66	65	60	37	36	54	58	52	56	64	57	56	67	67	76	76	70	70	82	82	81	83	80	80	64	65.1	
	Minimum	50	45	42	33	30	31	21	37	30	20	17	15	26	31	23	38	42	39	39	32	39	45	37	27	35	44	53	57	58	53	35	36.3	
Marmarth	Maximum	50	67	61	60	56	51	65	65	61	48	64	75	57	58	61	65	78	62	54	66	74	66	73	78	65	73	82	78	82	78	69	55	62.5
	Minimum	38	42	23	33	40	33	24	28	38	23	30	33	38	35	26	35	42	41	34	35	47	45	34	40	58	63	63	65	55	47	45	39.1	
Minot Airport	Maximum	76	71	53	48	44	43	64	62	49	40	39	70	53	44	56	64	61	55	63	68	66	72	74	66	69	85	84	80	84	78	72	53	62.5
	Minimum	43	46	37	35	30	28	26	38	35	25	23	23	30	30	34	39	40	36	42	37	43	44	37	31	49	52	58	61	55	49	39	38.4	
Mott	Maximum	68	68	60	58	55	58	62	62	60	52	46	72	67	55	58	66	68	64	53	64	70	71	60	64	75	79	76	70	76	70	65	55	63.5
	Minimum	42	44	32	35	40	30	26	30	34	24	27	25	35	32	33	36	36	42	38	34	34	40	44	32	41	40	41	40	54	46	42	36.5	
Pembina Airport	Maximum	82	67	55	47	44	52	65	58	53	34	36	52	52	40	58	62	52	56	62	67	76	77	66	67	82	86	85	86	83	81	57	62.6	
	Minimum	50	49	42	37	33	39	32	38	38	29	22	21	17	32	30	26	32	43	38	42	38	39	44	41	37	36	46	51	62	61	49	38.2	
Sharon	Maximum	79	78	63	53	49	49	65	62	55	39	35	57	58	48	58	59	60	51	57	69	75	70	67	66	78	81	82	84	82	79	64	63.6	
	Minimum	48	45	41	38	34	32	29	36	37	22	19	16	35	32	26	42	43	42	42	36	41	51	43	38	37	46	53	64	57	58	34	39.3	
Steele	Maximum	76	75	61	55	50	54	62	62	54	48	35	66	62	51	49	52	59	52	52	63	72	69	66	66	77	79	79	81	78	76	60	62.6	
	Minimum	49	44	42	37	34	23	22	30	33	27	17	15	37	32	32	39	40	34	42	37	35	49	43	35	33	42	55	59	57	53	38	37.6	
Valley City	Maximum	79	79	65	54	48	48	68	63	63	63	53	38	60	63	57	63	62	60	57	66	76	71	65	67	78	83	83	85	81	78	70	65.6	
	Minimum	49	42	41	40	35	32	33	36	34	25	21	15	40	36	27	40	45	38	44	39	41	41	46	41	33	49	52	59	57	58	40	39.6	
Wahpeton	Maximum	79	77	62	55	53	5																											

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James				.06	T.		.03	.01			T.	T.		.44	.02	.03	.09	T.		.07	T.	.16	.19	.49	T.						.38	1.97	
Casselton	Red.			.20	.10		.10					.04			.20			.35		.14	T.										.22	1.69	2.94	
Cooperstown	Sheyenne		.20	.04	.07							.10			.41		T.	.15		.24	T.										.13	.55	1.84	
Courtenay	James		T.	.10	.11	.03	.07				T.	.10			.44			T.		.24	.03										.18	.23	1.75	
Devils Lake ¹⁵	Devils Lake			.01	T.	.16				.11	T.	.17		.02	.11		T.	.10		.01	.09							T.		T.	.14		.02	
Edgeley	James		.02												.25		.03	.11		.24	.02										.18	.12	1.04	
Edmore	Devils Lake		T.	.06	.05	.10				.14		.08			.22		.03	.16	T.	.26	.15		T.					T.	.05		.18	.14	.51	1.67
Ellendale	James		.22												.02		T.	.15		.23	.11										.16		1.11	
Fargo ¹⁵	Red.		.11	.23	T.	.10				T.	T.	.05		T.	.13		.04	.19		.06	T.		.01	T.	.19				T.	T.	T.	.10	.12	2.04
Forman	Sheyenne	T.		.14			T.	T.							T.	.04		.03	.24		.05	T.		.06	.17						.07	.02	0.78	
Fullerton	James			.14						T.		T.				.04		.03	.21		.11	.08			.10						.19	T.	.09	
Gackle	do																																T.	
Grafton	Red.		.18	.17	.10	.01				.13	T.				.43			.19		.08													T.	1.22
Grand Forks Airport ³	do		.21	.30	.04	.13			.08	T.	T.				.46			.19		T.			.25						T.	T.		.01	.01	1.68
Hankinson ²	do			.19				.03							.04			.05			.16	T.	.11	.14	.04							.01	.05	0.81
Hannah	Pembina			.10		.15						.15		.15	.20			.30														.65		1.70
Hillsboro	Red.		.32	.06	T.	.10			.03		.07	T.			.44		T.	.13		.15	.04		.65									.76	T.	2.71
Jamestown Airport ³	James		.12	.08	T.	.03				T.			T.		.19	T.	.05	.02		.20	.04		.02	T.					T.	T.		.58	.14	1.47
Langdon	Pembina			.04	.06	.01				.15		.07			.21			.28		.03	.04											.08		0.97
Larimore	Red.		.15	.10	T.	.10			.02		.10				.40			.25		.01		.15	.01	.14		.05				T.		.29	1.56	
Lisbon	Sheyenne			.11				.04							.04			.17			.15	.01	.08	T.	.05									

*Included in the next measurement.

² Measured in the morning: for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

[WBO, Minneapolis, 9-19-46--1050]

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OCT 14 1946

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LV BISMARCK, N. D., JUNE 1946 No. 6

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GENERAL SUMMARY

While June rainfall averaged only slightly below the normal, the first three weeks were the driest ever recorded in June at many stations in the central and west portions. The lack of rainfall at this critical time had a detrimental effect on crops, pastures, and gardens. During the last week, heavy to excessive rains occurred attended by severe local storms, but the drought was broken and crops began a remarkable comeback.

Temperatures averaged only slightly above seasonal normal. On the other hand, unusually low temperatures were recorded on the 1st and 2d with frost and freezing temperatures. Except for extremely tender vegetation, little crop damage resulted. Sunshine was about 10 percent below the normal over the northern portion and near the seasonal normal over the south portion. Thunderstorms were numerous and locally severe with hail. Dates of thunderstorms were: 5, 6, 7, 13, 14, 15, 16, 17, 22, 23, 24, 25, 26, 27, 28, 29, and 30.

On June 6, high winds were general, with greatest damage in a path from McHenry County where the storm began at 10 a. m. southeastward to Richland County by 6 p. m. About 200 barns and other buildings were damaged or destroyed with an estimated \$60,000 loss.

On June 23 there were two tornadoes about 9 p. m.; one, 1 mile north of Selfridge, and the other 2 1-2 miles south. Four people were injured and property damage was estimated at \$79,000; crop damage was about \$6,000.

A severe hailstorm with an estimated 90 percent loss covered a narrow strip in Hettinger, Adams, and Bowman counties on the 23d.

A severe hailstorm extending from Youngstown in Morton County southeastward about 15 miles and about 1 mile wide, did 100 percent damage to crops. Hail was the size of peas to 1 inch but was heavy and piled to a depth of 3 feet in some places. The storm occurred on June 27 about 3 a. m. and also cut a narrow path in Burleigh County from Bismarck southeastward to near Moffit. Crop losses are estimated at \$42,000. Numerous other storms of a damaging character occurred locally over the state but no estimate of the damage is available.—M. S. C.

TEMPERATURE

The mean temperature for the state was 63.2°, or 0.4° above the 1892-1946 average for June. The mean temperature for the eastern division was 63.8°; for the middle division, 63.3°; and for the western division, 62.4°. The highest mean temperature was 67.0° at Linton, and the lowest, 59.4° at Stanley, making a range in mean temperature of 7.6°. The absolute range was 74°, from 100° at Ellsworth on the 22d, to 26° at Edmore on the 2d. The average daily excess in temperature for the state since January 1, 1946, is 3.3°.

PRECIPITATION

The average precipitation for the state was 3.06 inches, or 0.43 inch less than the 1892-1946 average for June. In the eastern division the average amount was 3.65 inches; in the middle division, 2.86 inches; and in the western division, 2.66 inches. The greatest monthly amount reported was 7.32 inches at Larimore; the least, 1.19 inches at Fairfield. The greatest amount recorded in any 24 consecutive hours was 3.90 inches at Edmore on the 27-28th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 1.76 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.37	2	29.46	6	11.5	50	nw.	27	76	81	46	44	62	88
Devils Lake...	30.38	3	29.59	6	8.5	25	s.	9	75	80	46	48	53	113
Fargo.....	30.37	3	29.45	6	11.8	59	w.	28	79	84	55	57	65	98
Williston.....	30.42	18	29.43	6	7.0	34	nw.	6	67	76	47	39	55	113

† And other dates.

COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	60.5	94	28	3.59	4.44	2.03	3.35	0	8	11	9	10
1893...	67.4	103	33	3.25	4.28	2.60	3.38	0	9	13	10	7
1894...	68.8	103	25	4.08	2.31	3.93	3.44	0	7	17	6	7
1895...	59.7	97	29	5.37	4.54	4.11	4.67	0	12	8	13	9
1896...	65.6	97	37	3.06	4.33	4.68	4.02	0	9	16	9	5
1897...	61.7	109	20	4.40	4.40	2.45	3.75	0	9	11	10	9
1898...	62.6	105	26	3.17	3.21	3.18	3.19	0	9	10	10	10
1899...	62.2	105	30	3.20	4.25	3.98	3.81	0	10	12	11	7
1900...	66.9	109	27	1.59	1.54	1.04	1.39	0	5	15	11	4
1901...	61.6	95	22	7.20	5.31	5.90	6.14	0	15	10	11	9
1902...	58.0	97	28	3.67	3.75	3.53	3.65	0	11	12	9	9
1903...	62.4	96	27	1.02	1.52	1.78	1.44	0	4	17	8	5
1904...	61.4	100	30	5.95	5.92	4.82	5.56	0	11	13	8	9
1905...	59.7	97	32	4.49	4.64	3.87	4.33	0	12	10	7	13
1906...	62.0	95	32	3.80	4.21	6.34	4.78	0	11	13	8	9
1907...	61.9	95	25	3.47	2.53	2.80	2.93	0	10	12	10	8
1908...	60.4	93	27	2.91	3.63	3.70	3.41	0	10	12	9	9
1909...	62.9	98	28	3.94	2.49	3.92	3.45	0	10	12	11	7
1910...	67.3	111	19	1.26	1.85	3.00	2.04	0	6	16	9	5
1911...	66.9	108	25	3.13	3.42	2.61	3.05	0	9	13	10	7
1912...	61.8	104	28	2.27	2.11	1.65	2.01	0	6	16	8	6
1913...	65.8	101	27	2.85	1.98	2.52	2.45	0	8	16	9	5
1914...	62.2	93	29	5.67	7.13	6.64	6.48	0	13	9	11	10
1915...	56.7	94	20	5.59	5.11	3.73	4.81	0	12	9	12	9
1916...	58.0	92	29	4.06	3.51	4.05	3.87	0	11	10	11	9
1917...	59.7	103	19	2.38	1.88	1.96	2.07	0	8	13	11	6
1918...	63.3	102	27	2.23	1.53	0.97	1.58	0	7	14	11	5
1919...	67.2	108	22	3.15	1.99	1.50	2.21	0	5	15	10	5
1920...	62.2	98	26	3.64	3.74	3.20	3.53	0	11	12	12	6
1921...	68.2	108	30	3.28	2.83	4.74	3.62	0	9	14	10	6
1922...	63.5	108	30	3.38	3.55	4.44	3.79	0	9	15	8	7
1923...	66.1	100	30	4.79	2.83	4.21	3.94	0	8	13	12	5
1924...	58.6	89	26	3.45	4.51	4.17	4.04	0	11	10	12	8
1925...	61.5	98	30	7.72	5.43	4.84	6.00	0	14	11	10	9
1926...	60.7	104	22	2.66	2.47	2.71	2.61	0	9	13	9	8
1927...	61.2	99	22	3.81	2.34	2.30	2.82	0	9	11	13	6
1928...	58.2	92	24	4.83	5.30	4.53	4.89	0	12	10	10	10
1929...	61.4	98	21	1.10	1.10	2.12	1.44	0	7	16	9	5
1930...	63.3	96	30	2.31	3.42	3.53	3.09	0	10	13	11	6
1931...	68.4	110	27	2.93	2.05	2.07	2.35	0	8	14	10	6
1932...	67.0	98	34	3.33	3.61	4.83	3.92	0	10	14	10	6
1933...	70.7	110	33	1.99	1.66	1.67	1.77	0	7	18	10	2
1934...	64.3	100	29	3.74	2.85	2.54	3.04	0	11	12	10	8
1935...	60.3	99	25	3.65	2.70	2.77	3.04	T.	10	11	12	7
1936...	66.4	110	28	1.41	1.40	1.20	1.34	0	6	16	10	4
1937...	63.5	109	25	3.04	5.62	3.43	4.03	T.	7	15	9	6
1938...	64.2	99	27	1.82	2.87	3.49	2.73	0	9	11	11	8
1939...	60.1	99	29	5.44	4.67	3.67	4.59	0	12	10	11	9
1940...	63.1	102	27	2.02	2.10	2.60	2.24	0	9	13	11	6
1941...	64.2	97	32	5.86	4.91	5.85	5.54	0	12	12	9	9
1942...	60.1	90	27	2.81	2.81	3.75	3.12	0	11	9	12	9
1943...	60.4	102	28	4.61	5.07	5.54	5.07	1.3	13	8	11	11
1944...	61.7	93	30	4.25	7.10	7.94	6.43	T.	13	10	9	11
1945...	57.5	99	28	2.26	2.41	2.77	2.48	0	11	8	12	10
1946...	63.2	100	26	3.65	2.86	2.66	3.06	0	10	10	14	6
Period	62.8	111	19	3.54	3.45	3.47	3.49	T.	9	13	10	7

NAT.
HIST.

Climatological Data for June 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	63.6	.....	90	14†	26	2	6.98	.....	2.03	29	0	14	23	4	3	nw.	Albert Thoren.
Carrington	Foster	1,579	49	64.2	+1.0	99	23	30	1†	2.54	-0.91	1.35	28	0	12	6	10	14	.....	Soo Line Agent.
Casselton	Cass	934	51	65.2	+1.3	93	23	32	2	3.74	+0.15	0.66	19-20	0	14	12	13	5	se.	Joseph L. Farrell.
Cavalier	Pembina	894	39	63.2	.....	90	15†	29	1	3.62	+0.54	2.25	27-28	0	8	4	23	3	se.	City Light & Power Co.
Colgate	Steele	1,180	13	.....	.....	.....	.....	.....	.....	4.06	+0.58	1.72	27-28	0	10	9	15	6	ne.	O. M. Jensen.
Cooperstown	Griggs	1,423	50	63.2	0.0	90	23	29	1	3.28	+0.01	1.02	28	0	11	8	16	6	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	16	.....	.....	.....	.....	.....	.....	2.20	-1.00	1.47	27	0	5	10	19	1	e.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	71	63.5	+1.6	90	15†	33	2	2.98	-0.58	1.50	27-28	0	10	4	17	9	ne.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	64.2	+0.6	95	6	28	2	3.21	-0.46	0.64	19-20	0	12	9	15	6	ne.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	60.2	-2.1	91	22	31	2	5.05	+1.94	3.90	27-28	0	7	18	10	2	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	64.2	-0.6	96	6	30	2	3.40	-0.01	1.34	19-20	0	11	14	8	8	se.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	64.6	+0.2	90	23	34	1	4.03	-0.02	0.68	6-7	0	15	2	15	13	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	65.7	+0.7	92	6†	31	1	4.20	+0.60	1.06	15	0	10	21	7	2	s.	Helge Dyte.
Fullerton	Dickey	1,439	49	65.8	+1.6	97	6	31	2	3.24	-0.67	1.14	19	0	12	14	12	4	ne.	F. O. Alin.
Gackle	Logan	1,951	16	64.0	.....	92	23	27	2	4.28	+0.81	1.39	16-17	0	13	14	13	3	s.	Tony Martiu.
Grafton	Walsh	827	55	64.0	+0.3	91	14†	31	2	3.80	+0.55	1.15	28	0	12	7	19	4	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	64.0	+0.6	90	22	34	2	4.60	+1.32	1.53	27-28	0	15	9	12	9	nw.	University of N. Dak.
Grand Forks Airt. 2 1/2 mi. W	Grand Forks	834	6	62.6	.....	88	14	31	2	4.53	.....	1.37	29	0	10	3	13	14	n.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	65.7	-1.2	95	23	28	1	2.81	-0.77	0.70	25	0	10	7	13	10	se.	Soo Line Agent.
Hannah	Cavalier	1,568	53	59.7	-0.8	86	18	34	15	1.84	-1.57	0.65	29	0	5	0	30	0	nw.	A. E. Prior.
Hillsboro	Trails	901	41	61.5	-0.2	92	23	33	1	4.74	+1.32	1.10	29	0	14	12	13	5	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	64.6	+0.9	91	14	30	2	3.28	-0.22	1.00	14-15	0	11	8	12	10	ne.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	6	64.0	.....	88	22†	30	2	3.16	.....	0.80	28	0	13	7	15	8	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	62.1	.....	86	27	27	2	2.36	.....	1.00	28	0	8	10	15	5	se.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	61.6	+1.0	89	15†	30	2	1.67	-1.57	0.65	27-28	0	6	13	12	5	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	62.4	-0.5	87	14†	31	1	7.32	+3.76	3.81	29	0	11	9	7	14	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	65.0	+0.6	93	23	32	1†	3.75	-0.15	1.06	15	0	10	7	5	18	nw.	J. O. Halverson.
Mayville	Trails	975	51	64.5	0.0	88	14	33	1	4.77	+1.40	1.26	27-28	0	17	6	21	3	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	61.5	-0.3	92	22	28	1	2.96	-0.51	0.95	28	0	9	10	14	6	nw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	66.3	+1.0	94	23	34	1†	2.77	-1.06	0.80	15	0	7	23	2	5	sw.	J. G. Carlson.
McVie	Nelson	1,467	5	.....	.....	.....	.....	.....	.....	3.56	.....	1.00	27-28	0	11	9	13	8	nw.	C. W. McMillan.
Oakes	Dickey	1,318	18	66.0	+0.7	95	6†	32	1†	2.74	-0.90	1.08	20	0	13	10	18	2	e.	C. M. Hagen.
Park River	Walsh	998	43	62.8	-0.3	91	22	32	1†	3.89	+0.13	1.57	26-27	0	9	16	10	4	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	61.9	-0.9	88	14†	38	2	4.80	+1.61	2.48	27-28	0	11	1	18	11	n.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	61.5	.....	90	22	30	1†	5.82	+2.32	1.78	29	0	13	14	12	4	nw.	T. C. Overland.
Sharon	Steele	1,516	23	63.6	+0.6	89	27	31	1	3.26	-0.35	1.03	28	0	14	14	12	4	n.	Hugh Lyon.
Valley City	Barnes	1,229	42	65.7	+1.6	90	23	32	2	3.93	+0.38	1.17	28-29	0	11	7	19	4	n.	Hettie Blythe.
Wahpeton	Richland	962	55	65.6	-0.2	94	24	31	1	3.46	-0.12	0.79	24-25	0	13	9	15	6	ne.	State School of Science.
Average for Eastern Division				63.8	+0.1	89	23	26	2	3.65	+0.11	3.90	27-28	0	11	10	14	6	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	63.2	0.0	90	6†	29	2	3.27	-0.15	0.77	16-17	0	12	6	13	11	ne.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	59.8	.....	85	15†	30	2†	3.26	.....	1.59	29	0	5	11	17	2	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	61.7	-0.4	91	22	32	2	1.58	-1.78	0.77	29	0	5	9	13	8	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	65.3	+1.1	93	22	34	2	3.02	-0.21	2.02	27-28	0	10	8	10	12	ne.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE	Burleigh	1,650	7	65.2	+2.3	95	22	34	2	2.99	-0.36	1.95	27-28	0	13	8	10	12	ne.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	62.5	+0.7	87	4†	32	18	2.72	-0.47	1.47	29	0	9	10	14	6	se.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	63.5	+1.0	90	22	27	2	3.26	-0.14	1.53	23	0	9	14	7	9	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	63.9	+0.2	94	22	30	2	3.95	+0.47	1.81	24-25	0	11	13	13	4	se.	J. W. Evans.
Center	Oliver	2,100	9	63.2	.....	94	22	29	2	3.66	.....	1.27	25	0	9	11	17	2	nw.	Fred L. Hein.
Drake	McHenry	1,634	17	63.2	-0.6	90	15†	27	2	2.88	-0.28	1.32	23-24	0	7	18	12	0	s.	Geo. A. Paulus.
Dunsmuir, 2 miles NNE	Rolette	1,682	51	61.4	0.0	85	15†	36	1	2.77	-0.24	1.93	29	0	5	5	22	3	nw.	State Tuberculosis San.
Eckman	Bottineau	1,509	41	61.0	-1.0	88	21	31	2†	3.65	+0.67	1.10	30	0	8	3	22	5	se.	E. R. Sherman.
Fessenden	Wells	1,610	35	63.8	+1.2	95	22	31	2	2.33	-1.15	1.07	27-28	0	11	15	12	3	nw.	John V. Zuber.
Fort Yates	Sioux	1,670	47	66.1	-0.5	92	22†	28	2	2.05	-1.42	1.00	28	0	7	17	7	6	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	26	63.6	+1.7	89	21	34	2†	2.79	-0.19	0.84	29	0	7	7	15	8	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	63.7	+0.8	97	22	32	2	2.76	-0.66	0.87	23-24	0	12	4	14	12	n.	Mae H. Vorachek.
Granville	McHenry	1,504	40	63.0	+0.3	87	15†	29	2	1.37	-1.82	0.55	24	0	6	16	10	4	s.	Fred Roble.
Hansboro	Towner	1,597	39	60.9	+0.1	87	10	34	1†	2.00	-1.32	1.32	29	0	4	10	17	3	w.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	44	.....	.....	.....	.....	.....	.....	4.78	+1.41	1.55	23-24†	0	10	9	16	5	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	63.2	.....	92	22	29	2	2.41	.....	1.21	29	0	6	3	21	6	.....	John Dulmage.
Linton	Emmons	1,711	30	67.0	+1.8	93	6†	30	2	4.40	+1.13	2.03	24-25	0	13	10	8	12	se.	Wm. Heyerman.
Madock, 1 mile E	Benson	1,604	32	64.0	+1.8	96	22	28	2	4.06	+0.67	1.50	23-24	0	9	4	21	5	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1																				

Climatological Data for June 1946—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Elbowoods	McLean	2,082	54	63.1	−0.3	100	22	31	2	1.83	−1.85	0.42	29	0	9	13	14	3	sw.	H. W. Case.	
Epplig	Williams	2,224	38	62.5	−0.6	91	22	37	1	2.62	−0.69	0.88	6	0	8	9	14	7	nw.	T. Beachler.	
Fairfield, 9½ miles N.	Billings	2,650	18							1.19	−1.54	0.28	25	0	10	17	9	4	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N.	Billings	2,790	29	63.2		96	22	33	1	2.20	−1.22	0.49	5	0	11	15	10	5	nw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,781	6	60.6	−2.0	94	22	33	2	2.89	−0.70	1.09	5	0	14	4	16	10	w.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	38	62.2	+1.2	90	21½	33	10	3.31	+0.35	1.45	6	0	7	17	12	1	e.	L. D. Nielson.	
Halliday	Dunn	2,073	5							2.55		1.29	23–24	0	9	13	13	4	nw.	John Kisse.	
Hettinger	Adams	2,675	40	63.5	−0.5	92	22	30	2	2.32	−0.84	0.91	11–12	0	6	17	4	9	se.	Edgar Martin.	
Kenmare	Ward	1,799	15	63.0	+0.6	88	21	37	1½	1.38	−1.51	0.44	29	0	9	13	9	8	se.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	38	63.6	+0.2	94	22	37	2	3.46	+0.33	1.41	23	0	12	12	12	6	nw.	S. P. Grane.	
Medora, 1½ mi. W.	Billings	2,271	32	65.4		92	9	32	2	1.94	−1.48	0.73	5	0	9	21	5	4	w.	Harry Roberts.	
Mott	Hettinger	2,424	40	62.8	−2.2	95	23	33	2	3.77	+0.52	0.80	26	0	7	10	15	0	nw.	Northern Pacific Agent.	
New England	Hettinger	2,621	55	63.6	0.0	90	15	35	2	3.36	+0.20	0.73	27	0	14	6	19	5	nw.	Alfred Hasel.	
New Hradec, 1 mile E.	Dunn		5	62.2		92	22	34	1	3.54		1.27	24	0	11	12	15	3	s.	Peter F. Fick.	
Parshall	Mountrail	1,929	32	62.4	+0.4	97	22	31	2	1.76	−1.73	0.60	6	0	11	2	25	3	nw.	C. E. Shubert.	
Portal	Burke	1,954	33	60.4	−0.2	90	21	34	18	2.97	−0.12	1.47	28	0	10	8	15	7	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	42																	E. J. Lewis.	
Richardton, 1½ miles N.	Stark	2,467	31	62.9	−0.2	93	22	33	1	3.51	+0.04	0.87	25	0	12	5	18	7	se.	Assumption Abbey.	
Ryder	Ward	2,108	18							1.82	−1.29									S. C. Schellenbaum.	
Sanish	Mountrail	1,835	21	61.0	−2.3	96	22	33	2	2.65	−0.72	0.86	22	0	10	4	23	3		H. J. Bugge.	
Stanley	Mountrail	2,258	9	59.4		88	21	30	2½	2.29		0.53	6	0	6	9	13	8	nw.	Leroy Edwards.	
Tagus	Mountrail	2,179	18							2.13	−0.87	0.53	29	0	10	10	14	6	w.	Geo. N. Pilgard.	
Tioga	Williams	2,279	18							2.34	−0.72	0.85	6	0	8	12	8	10	sw.	L. A. Simon.	
Trotters	Golden Valley		21							1.63	−1.70	0.45	25	0	13	2	24	4	sw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	6	63.3		96	22	34	2	1.91		0.68	6	0	9	5	20	5	n.	H. Glenn Sims.	
Watford City	McKenzie	2,084	34	62.4	−0.7	90	14	36	1	4.25	+1.10	1.88	29	0	10	6	21	3	nw.	J. C. Zeller.	
Wildrose	Williams	2,258	17							2.93	−0.17	1.27	28	0	7	25	2	3	nw.	Jonathan Winkler.	
Williston	Williams	1,878	68	62.8	+0.1	93	22	40	1	2.55	−0.88	0.90	29	0	12	3	14	13	nw.	U. S. Weather Bureau.	
Average for Western Division				62.4	−0.3	100	22	80	2	2.66	−0.81	1.88	29	0	10	11	13	6	nw.		
Average for the State				63.2	+0.4	100	22	26	2	3.06	−0.43	3.90	27–28	0	10	10	14	6	nw.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for June 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum..	53	62	70	79	80	90	80	72	80	84	78	71	80	86	86	80	61	56	53	65	78	86	90	81	75	82	84	72	81	69	75.5	
	Minimum..	31	29	34	48	52	53	52	46	50	51	56	54	48	55	61	59	48	46	47	46	49	52	64	58	51	51	58	58	61	50	50.8	
Bismarek Airport	Maximum..	53	63	70	84	80	85	71	73	84	88	82	83	85	83	91	80	64	61	68	77	85	95	90	68	79	82	84	76	84	75	78.0	
	Minimum..	37	34	40	54	54	57	54	46	55	54	58	60	52	55	61	59	51	45	46	50	43	56	60	56	56	58	49	56	59	53	52.3	
Bottineau	Maximum..	37	64	71	87	80	70	64	80	84	80	85	81	80	85	84	80	59	68	77	80	87	79	69	66	79	80	80	70	77	70	76.1	
	Minimum..	38	37	36	48	49	52	49	37	49	59	52	53	49	52	58	56	48	32	42	51	48	58	53	49	50	53	56	54	54	45	48.9	
Carson	Maximum..	52	61	60	86	78	87	70	74	84	85	79	87	80	88	91	81	65	57	67	79	87	94	90	75	76	82	85	75	83	73	78.0	
	Minimum..	35	30	38	48	52	57	59	39	53	55	51	54	48	54	57	54	52	42	40	45	45	53	59	53	51	53	55	51	59	47	49.8	
Crosby	Maximum..	56	64	74	84	81	66	61	76	86	77	82	78	84	84	85	85	73	62	67	77	82	91	80	59	61	77	81	75	73	75	74.9	
	Minimum..	36	30	40	42	52	50	44	38	49	54	51	54	50	49	52	51	50	34	38	48	46	50	47	49	49	45	50	47	49	44	46.3	
Devils Lake	Maximum..	55	66	71	82	81	66	68	71	80	82	86	79	78	86	90	78	62	67	68	72	87	90	86	60	77	79	77	71	80	73	76.0	
	Minimum..	36	33	41	44	51	52	48	45	50	52	54	52	46	57	61	58	47	41	47	51	53	64	54	52	53	60	61	59	55	52	51.0	
Dickinson Airport...	Maximum..	49	58	69	86	75	78	64	72	85	82	77	75	80	85	89	74	58	55	70	78	83	93	86	60	77	79	77	71	80	73	74.6	
	Minimum..	35	39	39	49	51	53	45	42	54	58	52	55	50	54	57	52	36	41	40	47	48	53	56	51	51	52	55	49	59	46	49.3	
Dunn Center	Maximum..	57	62	71	85	80	77	63	74	86	76	81	78	81	84	86	74	56	59	71	79	85	97	80	63	79	81	77	76	82	75	76.1	
	Minimum..	32	39	36	43	53	54	45	40	48	59	54	57	48	49	51	55	56	40	48	41	54	58	53	52	55	55	50	58	46	49	49.1	
Fargo Airport	Maximum..	55	64	71	77	79	80	78	68	78	82	84	82	78	87	87	83	66	65	60	64	82	85	90	77	72	85	88	77	83	71	76.6	
	Minimum..	34	35	36	45	55	50	52	51	49	58	51	58	45	58	61	66	52	51	49	49	47	58	62	59	54	57	66	59	56	55	52.7	
Fessenden	Maximum..	56	66	72	83	83	76	69	62	71	81	82	85	80	84	81	93	90	67	63	65	73	87	95	90	65	81	82	82	81	84	76	78.1
	Minimum..	34	31	37	45	52	50	51	41	51	51	56	55	46	56	58	49	47	35	44	49	51	58	53	52	52	58	60	54	55	50	49.4	
Fullerton	Maximum..	57	65	72	84	85	97	78	73	81	87	86	78	85	92	93	84	69	64	55	67	82	88	92	80	77	85	87	76	86	75	79.8	
	Minimum..	33	31	37	45	48	56	54	48	49	54	56	60	48	51	61	66	54	48	49	46	47	53	67	60	55	55	63	59	60	58	52.4	
Garrison	Maximum..	56	64	71	86	84	74	66	75	85	83	85	82	86	87	90	80	61	65	72	81	87	97	78	64	78	82	81	76	82	74	77.7	
	Minimum..	35	32	38	49	56	49	48	42	54	57	57	56	52	50	59	54	46	39	42	50	45	55	52	51	54	56	55	52	58	47	49.7	
Golva	Maximum..	48	59	70	84	75	82	63	74	88	76	74	74	72	84	84	72	59	56	68	77	85	94	86	60	82	77	76	75	79	76	74.5	
	Minimum..	36	33	36	50	50	53	41	39	50	54	49	50	47	50	55	46	44	42	39	43	46	53	54	52	48	46	50	46	57	44	46.8	
Grafton	Maximum..	59	68	73	79	84	81	73	74	79	82	86	86	75	91	89	89	68	70	69	74	90	91	85	72	71	82	84	91	75	74	78.8	
	Minimum..	37	31	33	40	52	50	45	48	45	53	50	50	40	45	59	52	47	42	46	50	46	58	59	53	59	58	60	66	66	53	49.3	
Grand Forks Airport.	Maximum..	58	66	72	78	83	71	76	70	73	83	86	82	80	88	86	80	65	68	70	68	86	87	84	66	72	77	86	75	80	72	75.9	
	Minimum..	32	31	35	44	51	49	46	47	46	53	49	51	37	56	61	62	48	48	44	42	46	56	60	55	53	57	56	57	54	50	49.4	
Jamestown Airport..	Maximum..	53	65	71	82	83	79	74	71	80	85	85	83	77	86	86	82	66	64	62	75	85	88	68	76	83	87	76	84	72	77.2		
	Minimum..	32	30	36	45	54	53	51	45	47	49	53	57	48	54	60	62	47	45	48	48	48	54	64	56	54	58	60	58	57	50	50.8	
Kenmare/	Maximum..	58	65	72	85	85	70	62	72	84	80	86	81	87	87	85	80	57	67	79	84	88	58	51	50	50	52	55	50	51	46	50.1	
	Minimum..	37	38	43	52	52	52	49	43	54	59	56	56	54	52	52	52	49	37	46	53	55	58	51	50	50	52	55	55	52	74	76.0	
Langdon	Maximum..	58	67	70	78	83	78	71	72	80	84	87	82	75	86	89	85	75	69	73	76	89	86	73	56	72	85	88	83	75	74	77.3	
	Minimum..	32	30	36	47	43	47	42	38	47	50	46	47	37	50	57	54	42	31	41	48	47	56	53	48	49	52	55	55	52	46	45.9	
Marmarth	Maximum..	48	60	71	85	80	85	72	72	90	84	74	73	80	84	85	78	70	53	68	74	85	94	86	62	78	78	78	74	81	75	75.9	
	Minimum..	39	37	43	55	55	62	43	42	53	58	53	55	48	57	58	51	45	43	43	53	53	60	53	50	54	53	48	63	53	51	51.2	
Minot Airport	Maximum..	55	65	71	86	83	68	62	71	83	78	85	82	85	83	85	76	60	65	75	80	87	85	72	60	78	80	79	71	79	74	75.4	
	Minimum..	39	33	40	52	54	51	50	41	52	58	56	58	52	58	56	56	43	37	42	53	54	59	53	51	55	56	56	53	58	49	50.8	
Mott	Maximum..	50	60	68	81	79	76	78	78	85	82	76	74	78	84	88	79	72	60	67	82	93	95	72	75	74	89	76	84	77	77.6		
	Minimum..	38	33	37	47	48	54	45	40	46	48	51	55	50	55	54	52	50	43	44	41	40	38	61	52	52	54	51	57	48	47	47.9	
Pembina Airport.....	Maximum..	60	68	73	78	79	69	73	68	79	84	76	66	88	88	76	58	68	73	73	88	85	72	63	72	80	87	71	76	70	74.7		
	Minimum..	42	38	41	42	52	48	47	45	50	55	50	51	41	52	57	55	46	40	44	50	46	57	53	49	51	56	55	56	54	49	49.1	
Sharon	Maximum..	57	67	70	77	82	72	72	72	77	83	85	82	74	86	87	81	70	65	64	70	85	88	87	78	70	80	89	78	81	72	76.6	
	Minimum..	31	34	39	47	51	51	55	44	51	53	52	61	43	55	59	59	47	42	46	47	47	57	58	53	51	58	60	59	53	52	50.5	
Steele	Maximum..	53	63	69	81	79	79	72	71	82	84	81	80	81	85	89	80	64	58	64	68	83	92	87	77	75	79	83	79	82	75	76.5	
	Minimum..	33	33	37	50	51	55	51	40	49	50	57	59	45	54	62	58	42	40	46	47	46	51	59	55	52	54	59	54	51	49	49.8	
Valley City	Maximum..	55	65	70	81	82	80	76	71	78	85	87	84	79	87	89	84	73	64	62	67	85	88	90	77	74	85	89	80	85	81	78.4	
	Minimum..	34	32	37	46	54	56	53	49	50	57	55	60	47	54	63	66	50	48	51	48	49	55	62	61	55	58	62	61	58	59	53.0	
Wahpeton	Maximum..	57	67	73	79	81	86	86	78	79	89	84	81	80	90	86	86	78	67	62	64	81	88	93	94	77	84	87	83	83	80.3		
	Minimum..	31	32	35	56	48	53	49	48	52	51	58	47	56	52	71	56	51	48	47													

Daily Precipitation for June 1946

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total				
Eastern Division																																					
Carrington ²	James Red.	T.					.53	.07	.02	T.	T.			.05	T.	.53	.07	.07	T.			T.			.01	.01	.17	.01	T.	1.35	T.	.04		2.54			
Casselton	Sheyenne						.40							.05	T.	.09	.31	.10	T.			T.			.23	.66	.22			.09	.24	.40		3.74			
Cooperstown	James					.08								.03	T.	.11	.11	T.							.32	T.	.10		.17	1.02	T.	.35		3.28			
Courtenay	Devils Lake	T.					.26	T.		T.	T.		T.	.16	.09	.08	.11	T.	.06						.08	.79	T.	.26		.98	.52	.01		2.20			
Devils Lake ¹⁵	James						.15					T.	T.	.12	.03	T.	.10							T.	T.	.23	T.		T.	3.90	.52			2.98			
Edgeley	Devils Lake						.67	.01		.01			T.	.18	T.	.15	.08	T.	.39						T.	.27				.11	.43		.01	3.21			
Edmore	James												T.	.09	.11	.39	.18	.06	.46	T.					T.	.29	.02	.23	.32	.58				4.03			
Ellendale	James												T.	.09	.11	.39	.18	.06	.46	T.					T.	.29	.02	.23	.32	.58				4.20			
Fargo ¹⁵	Red.						.67	.01		.01			T.	.18	T.	.15	.08	T.	.39						T.	.27				.11	.43		.02	4.03			
Forman	Sheyenne												T.	.09	.11	.39	.18	.06	.46	T.					T.	.29	.02	.23	.32	.58				4.20			
Fullerton	James												T.	.09	.11	.39	.18	.06	.46	T.					T.	.29	.02	.23	.32	.58				4.20			
Gackle	do						.15						T.	.09	.11	.39	.18	.06	.46	T.					T.	.29	.02	.23	.32	.58				4.20			
Grafton	Red.						.14	.24		T.	T.			.06	.09	.19	.30	.10	.03						T.	.30			.01	.15	.24			3.80			
Grand Forks Airport ³	do	T.					.20							.05	.27	.20		.03	.04						T.	.69	.09		.30	.18	1.37			3.80			
Hankinson ²	do						.11							.03	.15	.59	.09	.41							T.	.40			.05	.12	.10	T.		3.80			
Hannah	Pembina						.20							.27				.03	.04						T.	.69	.09		.30	.18	1.37			3.80			
Hillsboro	Red.						.11			.21				.03	.15	.59	.09	.41							T.	.40			.05	.12	.10	T.		3.80			
Jamestown Airport ³	James						.10	T.		T.			T.	.03	.15	.59	.09	.41							T.	.40			.05	.12	.10	T.		3.80			
Langdon	Pembina						.10							.13				.03	.04							T.	.69	.09		.30	.18	1.37		2.81			
Larimore	Red.						.16	.03						T.	.33	.03	1.20	.03								T.	.17			.03	.04			1.84			
Lisbon	Sheyenne	.02					.82	.10		.32				T.	.01	.17	.72	.33	.06							T.	.86	.04		.68	.16	T.	.51	3.75			
Mayville	Red.						.36								.53			.10								T.	.02		.45	.06	.01		.95	.48	2.96		
McHenry	James														.80	.04	.36		T.	.28	.57									.08	.38		.58	2.77			
McLeod	Sheyenne														.06	.05	.35	.33		.02	.02	1.08	.07						.25				.04	2.74			
Oknes ²	James	.01					.34							T.	.09	T.	.64		.09										.40	.03	.24	1.33	.23	3.39			
Park River	Red.						.15			T.					.08	.32	.73		.13	.09						T.	.05	.12	T.	.01	2.47	.65		4.80			
Pembina Airport ³	do	T.				.20									.10	.35	.03		.13	.09						T.	.04		.16	.02	1.48	1.78		5.82			
Petersburg	do						.59			.21				.01	.31		.37		T.	.05						.01	.03	.12	.02	.24	1.03	.02	.30	3.26			
Sharon	do						.84							T.	.09	.20	.01	.37		T.	.49					.22	T.	.22	.32	.90	.27			3.93			
Valley City	Sheyenne														.09	.20	.01	.37		T.	.49					.22	T.	.22	.32	.90	.27			3.93			
Walhpton	Red.						.23							.19		.33		.14			.20	.66	.02			.01	.09	.70	T.	.23	.20	.46		3.46			
Middle Division																																					
Ashley ³	Missouri						T.						T.	.14		.75		.33	.44	.17	.39	.02					.13	.12		.69		.08		3.27			
Bisbee	Devils Lake						.06			T.			T.	.05		.26											.26			.06		.44	.77		1.58		
Blismarck Airport ¹⁵	Missouri					.03							.05	.03		.09	.01	.01	.05		T.	T.		T.		.13	.21	.28	.15	1.86	.09	T.		2.99			
Bottineau ²	Mouse						.05	.20	.02	.04					T.	T.			.05								.50	T.			.41	1.10	.37		2.72		
Butte	do						.56	T.		T.				T.	T.		.05	.15									.27	1.26		.05	.08	.38	.46		3.26		
Carson	Heart	.02					.18						.26	.60													.97	1.52	.29	.11	.87	.06	.02		3.95		
Center	Missouri					.05										.03										.09	.97	.26	1.27	.29	.60		.10		3.66		
Drake ²	Mouse						.16	.44							.01			.08									.24	1.32			.38		.41		2.88		
Dunseith	do						.18	.03	T.	T.					T.		.03		.06	.04							T.	.30			.35	1.93			2.77		
Eckman	do						.41	T.		T.				.05	T.	.03		.06	.04								.09	.78	.01		.61	.85	1.10		3.65		
Fessenden	James													.05	T.	.03		.06	.04								.03	.38	.13	.07	T.	1.07	.06		2.33		
Fort Yates	Missouri					.05	.15						.04	.20		.30					T.							.31		T.	1.00			2.05			
Foxholm	Mouse						.35							.41		T.		.03										.21	.59		.05	.34	.84		2.79		
Garrison ³	Missouri					.13	.31								.03		.02	.06										.50	.37	.09	.05	.40	.28		2.76		
Granville	Mouse						.21							T.		.05												.05	.55			.32	.19		1.37		
Hansboro	Devils Lake						.12							.30		.88		.09	.05									.26				1.32		2.00			
Anton	Missouri						.36	.12					.07	.27		.05	T.	.06	.07	.12								.09	1.48	.55	T.	.05	.55	.08	4.40		
Ladlock	Sheyenne						.03	T.	T.					.05	T.	.06	.07	.12										.09	1.50	T.	.05	1.46	.35		4.06		
Mandan ²	Missouri					.03	T.						.06			.11	.16	.05											.25	.08	.46	1.27	.67		3.14		
Max ²	do						.43	.01						.08		.01		.12											.43	.61	.02	.01	.17		2.07		
McClusky	do						.07	.02	.34						.01		.01		.11										.04	1.21	.34	.10	.07	1.60	.27	1.27	5.53
Minot Airport ³	Mouse						.25	.01		T.	T.			T.	.04	T.		.01		.01									.20	.45	T.	.21	.01	.21		1.39	
Nohall	do						.32	.02			T.				.03		.01		.23										.29	.26	.03	.13	.32	1.47		2.90	
Napoleon	Missouri						.17	.02					.01	.19		.21		.01		.23										.83	.55	.92	.22	.73		2.69	
New Salem	Heart					.17	.03	.01	.05				.09		.02	T.	.06	.39	.04		.28									.83	.55	.92		1.00	.02	3.93	
Pettibone	James						.11				T.				T.														.33				.82	.03		2.31	
Rolla	Devils Lake						.46				T.				T.														.02	.30			.70	.94		2.07	
Rugby	do						.50				T.				T.														.02	.29			.40	.77		1.97	
Selfridge	Missouri				.15		.02	.02	.05					.40		.08	.02		.40	T.	.05								.15	.50		.75		.15	3.05		
Steele	do						.31									.40		.40	T.	.05									.02	.29			.70	.94		1.97	
Towner	Mouse						.03	.23							.08		.01													.02	.30		.38	.43		1.97	
Turtle Lake	Missouri						.03	.23							.08		.01													.02	.29			.38	.43		1.97

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 10-10-46-1050]

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LV

BISMARCK, N. D., JULY 1946

No. 7

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GENERAL SUMMARY

The monthly temperature for the state averaged slightly above the normal. There were no large fluctuations in temperature. Precipitation was unevenly distributed, with only light, scattered amounts occurring after the 18th. The rains occurred mostly as thundershowers which were reported on the following dates; 3, 4, 5, 6, 8, 9, 10, 13, 15, 16, 17, 18, 26, 27, and 31. These beneficial showers fell when most needed for the small grain crop, with the result of well filled heads or spring wheat, and an above normal harvest of wheat, barley, and oats well under way at the close of the month. The late crops (corn, potatoes, flax, beets, pastures, and ranges) were deteriorating rapidly from the lack of moisture at the close of the month. The heaviest rainfall occurred over the western part of the state, becoming lighter over the eastern sections. This distribution of the heavier amounts is quite unusual. Severe storms, mostly hail and very local in nature, caused some crop damage in nearly all sections of the state. During the late evening of the 16th and extending into the early hours of the 17th a high wind, hail, and rain storm struck the city of Williston in Williams County and did considerable crop damage for several miles around the city. The damage was estimated at about \$50,000, half to crops, the balance to buildings, glass, and airplanes. The wind reached an extreme velocity of 65 miles per hour. The hail lasted for a period of 14 minutes in the city of Williston with some of the stones larger than hen eggs. On July 31 a severe thunderstorm struck the Bismarck airport area at about 8 p.m. with an extreme velocity of 72 miles per hour from the west. For a 15 minute period dust cut the visibility to zero. This wind did considerable property damage, estimated at \$30,000; about 25 percent being to crops, the balance to barns, sheds, grainaries, and windmills and the destruction of a 350 foot radio tower 14 miles northeast of the Bismarck airport owned by KFYZ Radio Station. The electrical storm, but not the high and destructive wind, struck the city of Bismarck.—M. S. C.

TEMPERATURE

The mean temperature for the state was 70.6°, or 1.6° above the 1892-1946 average for July. The mean temperature for the eastern division was 70.3°; for the middle division, 70.6°; and for the western division, 71.0°. The highest mean temperature was 73.6° at Bismarck Airport, and the lowest, 66.1° at Belcourt, making a range in mean temperature of 7.5°. The absolute range was 76°, from 110° at Carson on the 26th, to 34° at Belcourt on the 25th. The average daily excess in temperature for the state since January 1, 1946, is 3.0°.

PRECIPITATION

The average precipitation for the state was 2.17 inches, or 0.26 inch less than the 1892-1946 average for July. In the eastern division the average amount was 1.64 inches; in the middle division, 2.23 inches; and in the western division, 2.65 inches. The greatest monthly amount reported was 5.45 inches at Forman; the least, 0.16 inch at Larimore. The greatest amount recorded in any 24 consecutive hours was 4.38 inches at Maddock on the 17th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 2.02 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.26	25	29.42	10	10.9	50	w.	31	75	83	49	48	75	3
Devils Lake...	30.30	25	29.50	9	7.6	29	nw.	10	79	87	51	53	69	15
Fargo.....	30.27	25	29.55	10	11.0	39	nw.	10	83	86	58	58	63	11
Williston.....	30.23	25	29.40	9	6.7	46	w.	17	71	78	46	40	71	10

† And other dates.

COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	68.7	108	31	3.44	2.98	3.28	3.23	0	8	19	8	4	
1893...	69.5	112	35	2.54	1.94	1.64	2.04	0	7	17	10	4	
1894...	71.7	107	38	0.92	0.73	0.25	0.63	0	3	20	8	3	
1895...	66.1	102	29	3.12	2.44	3.13	2.90	0	8	14	11	6	
1896...	67.5	107	31	1.67	1.48	1.37	1.51	0	6	15	10	6	
1897...	68.9	109	38	6.46	4.43	2.40	4.43	0	9	13	11	7	
1898...	67.6	106	28	3.07	2.40	2.00	2.49	0	7	15	11	5	
1899...	68.3	109	32	2.37	2.30	2.35	2.34	0	6	18	9	4	
1900...	67.9	107	33	2.89	2.26	1.60	2.25	0	6	16	10	5	
1901...	70.8	110	40	5.10	4.08	3.66	4.28	0	6	18	7	6	
1902...	67.6	106	34	2.34	2.00	2.10	2.15	0	5	20	7	4	
1903...	66.7	109	26	2.59	1.77	2.32	2.23	0	7	17	8	6	
1904...	64.4	102	34	2.96	2.83	0.60	2.13	0	6	17	8	6	
1905...	65.6	100	32	4.27	3.90	3.17	3.78	0	8	17	9	5	
1906...	66.9	102	34	2.90	1.82	0.45	1.56	0	11	13	8	10	
1907...	65.8	103	31	2.60	3.90	2.60	3.06	0	9	16	11	4	
1908...	68.6	103	31	1.89	2.37	1.46	1.91	0	6	19	9	3	
1909...	67.1	99	34	3.45	2.94	1.80	2.73	0	8	15	9	7	
1910...	70.0	114	33	1.30	2.10	1.40	1.60	0	5	18	9	4	
1911...	65.1	107	23	2.25	1.76	1.10	1.70	0	6	18	10	3	
1912...	66.0	106	30	4.52	3.07	3.38	3.66	0	10	12	13	6	
1913...	65.6	103	35	2.64	2.38	1.65	2.22	0	8	17	8	6	
1914...	72.1	109	36	2.62	1.85	2.03	2.17	0	6	19	9	3	
1915...	62.3	97	30	2.42	2.66	4.30	3.13	0	11	12	11	8	
1916...	73.1	105	33	4.71	2.76	1.41	2.96	0	7	19	9	3	
1917...	70.9	114	27	1.96	1.50	0.87	1.54	0	7	17	11	3	
1918...	65.5	102	34	2.84	2.90	2.46	2.73	0	7	14	10	7	
1919...	71.2	105	37	3.15	1.11	1.32	1.86	0	5	18	10	3	
1920...	68.3	103	31	2.27	2.33	1.73	2.11	0	7	18	11	2	
1921...	71.4	110	35	4.47	2.87	1.88	3.07	0	7	17	10	4	
1922...	65.6	100	30	2.28	2.44	2.72	2.48	0	8	16	11	4	
1923...	71.2	103	35	2.90	3.34	2.91	3.05	0	8	16	11	4	
1924...	65.5	99	32	1.93	2.04	1.83	1.93	0	6	18	9	4	
1925...	66.7	106	29	1.43	1.33	1.30	1.35	0	6	18	9	4	
1926...	70.3	108	32	2.35	1.78	1.99	2.04	0	7	18	8	5	
1927...	65.4	97	28	2.33	3.11	3.09	2.84	0	9	15	10	6	
1928...	67.4	96	38	4.65	5.32	4.49	4.82	0	10	16	10	5	
1929...	70.6	109	34	1.93	1.09	0.78	1.27	0	5	21	8	2	
1930...	72.3	107	34	1.83	0.80	0.49	1.04	0	5	21	8	2	
1931...	70.6	111	37	2.89	3.20	3.01	3.03	0	8	17	8	6	
1932...	70.0	108	36	1.95	2.22	1.68	1.95	0	7	19	8	4	
1933...	71.9	109	36	2.04	2.13	1.83	2.00	0	7	19	9	3	
1934...	71.8	112	29	1.58	1.80	0.77	1.18	0	6	18	10	3	
1935...	73.8	110	45	3.90	5.44	3.90	4.41	0	10	17	11	3	
1936...	79.9	121	38	0.71	0.48	0.92	0.70	0	4	22	8	1	
1937...	71.7	111	40	3.70	2.70	2.40	2.93	0	9	15	10	6	
1938...	69.7	104	39	3.11	3.85	3.05	3.34	0	9	15	13	3	
1939...	72.6	108	37	1.57	1.82	2.04	1.81	0	7	19	9	3	
1940...	71.6	107	37	4.29	3.75	3.05	3.70	0	11	14	13	4	
1941...	70.8	106	34	1.40	1.65	2.23	1.76	0	8	15	12	4	
1942...	67.1	97	36	2.71	2.86	1.73	2.43	0	7	13	13	5	
1943...	70.5	103	41	2.88	3.14	2.13	2.72	0	8	19	9	3	
1944...	67.6	102	33	3.41	1.08	0.74	1.74	0	6	16	13	2	
1945...	67.8	102	30	2.58	2.50	1.85	2.31	0	9	16	12	3	
1946...	70.6	110	34	1.64	2.23	2.65	2.17	0	7	16	12	3	
Period	69.0	121	23	2.76	2.46	2.06	2.43	0	7	17	10	4	

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Climatological Data for July 1946																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days					Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	70.6		97	30	40	24	0.58		0.20	7	0	5	22	8	1	se.	Albert Thoren.
Carrington	Foster	1,579	49	72.2	+2.8	103	31	44	25	0.87	-1.74	0.28	7	0	7	14	11	6	.....	Soo Line Agent.
Casselton	Cass	934	51	71.8	+1.9	95	13	45	17	0.96	-1.73	0.57	9	0	7	16	14	1	s.	Joseph L. Farrell.
Cavalier	Pembina	894	39	70.0		97	30	42	24	0.57	-2.07	0.20	10	0	5	12	18	1	se.	City Light & Power Co.
Colgate	Steele	1,180	13							2.45	-0.08	1.06	6	0	4	17	13	1	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	68.6	-1.0	94	13	44	24	1.39	-1.20	0.38	5	0	7	8	16	7	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	16							0.99	-1.63	0.62	3	0	3	15	16	0	se.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	71	70.6	+3.2	98	31	47	24	1.60	-0.97	0.75	9	0	7	13	12	6	se.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	69.6	-0.3	96	31	40	25	1.04	-1.53	0.48	5-6	0	9	13	17	1	s.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	66.8	-0.7	95	31	38	25	1.33	-1.51	0.45	6	0	7	28	0	3	se.	Mike Davis.
Ellendale	Dickey	1,457	48	70.1	-0.8	96	31	47	25	3.54	+0.89	1.12	18	0	7	17	6	8	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	71.2	+3.1	94	13	47	24	0.98	-2.45	0.32	6	0	8	9	16	6	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	72.6	+2.5	93	31	48	1	5.46	+2.58	2.62	18	0	9	14	13	4	se.	Art Waterman.
Fullerton	Dickey	1,439	49	70.6	+0.4	96	31	45	25	2.49	-0.39	0.96	13	0	8	17	11	3	s.	F. O. Alin.
Gackle	Logan	1,951	16	70.8		95	31	45	25	1.50	-1.18	0.31	26	0	9	12	16	3	se.	Tony Martin.
Grafton	Walsh	827	55	70.7	+1.9	95	30	43	24	1.08	-1.68	0.55	6	0	7	17	10	4	s.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	71.8	+3.3	96	30	44	24	0.78	-2.00	0.47	17-18	0	4	18	8	5	se.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	6	70.0		95	30	43	24	0.64		0.39	18	0	5	12	12	7	se.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	71.4	0.0	96	13	46	25	1.92	-0.95	0.49	9	0	9	18	3	10	w.	Soo Line Agent.
Hannah	Cavalier	1,568	53	67.1	+0.9	94	31	39	25	2.30	-0.13	0.90	10	0	5	5	23	3	sw.	A. E. Prior.
Hillsboro	Trail	901	41	70.8	+0.1	95	13	45	24	1.74	-0.90	0.85	18	0	7	19	12	0	se.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	71.3	+1.7	97	13	45	25	2.57	-0.13	1.24	27	0	8	11	15	5	se.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE.	Stutsman	1,491	6	70.6		97	27	43	25	2.84		1.33	27	0	10	13	9	9	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	68.2		96	27	39	25	1.24		0.47	9	0	3	14	15	2	se.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	68.0	+1.7	97	30	37	25	2.03	-0.47	1.06	3	0	4	21	7	3	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	68.5	+0.4	95	30	46	24	0.16	-2.78	0.10	31	0	2	14	11	6	s.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	70.7	+0.3	95	31	46	25	2.20	-0.70	0.58	7	0	10	18	4	9	se.	J. O. Halverson.
Mayville	Trail	975	51	71.2	+1.0	96	13	45	24	0.57	-2.14	0.22	10	0	6	11	19	1	se.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	68.8	+0.7	96	27	41	24	0.86	-1.94	0.43	27	0	6	18	9	4	s.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	70.8	-0.6	96	13	45	25	4.12	+1.27	1.72	18	0	8	25	4	2	se.	J. G. Carlson.
McVelle	Nelson	1,467	5																	C. W. McMillan.
Oakes	Dickey	1,318	18	72.2	+0.5	97	31	49	1	3.18	+0.33	1.10	14	0	10	20	8	3	s.	C. M. Hagen.
Park River	Walsh	998	43	70.1	+1.6	96	30	44	25	0.24	-2.37	0.12	22	0	3	20	9	2	se.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	68.0	+0.2	96	30	40	25	1.25	-1.16	0.40	18	0	7	10	17	4	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	68.8		96	30	43	24	0.29	-2.67	0.13	6	0	7	18	11	2	se.	T. C. Overland.
Sharon	Steele	1,516	23	70.6	-0.2	97	13	45	24	1.51	-1.15	1.08	27	0	10	10	17	4	se.	Hugh Lyon.
Valley City	Barnes	1,229	42	70.5	+0.4	95	31	48	1	1.21	-1.51	0.48	9-10	0	12	17	13	1	se.	Hettie Blythe.
Walhpeton	Richland	962	55	71.7	+0.8	92	13	49	26	2.71	-0.24	0.75	18	0	7	20	9	2	se.	State School of Science.
Average for Eastern Division				70.3	+0.9	103	31	57	25	1.64	-1.12	2.62	18	0	7	16	11	4	se.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	69.1	-0.6	98	31	40	25	2.96	+0.30	1.06	5-6	0	11	11	12	8	se.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	66.1		97	31	34	25	2.40		0.70	17	0	5	13	14	4	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	69.9	+2.5	100	29	39	23	1.52	-1.18	0.59	8	0	4	22	6	3	s.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	73.4	+2.9	103	31	51	23	2.03	-0.25	1.17	17	0	6	12	12	7	se.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	7	73.6	+4.2	104	31	49	11	2.10	-0.14	0.97	17	0	9	12	12	7	se.	U. S. Weather Bureau.
Botineau	Botineau	1,648	55	68.6	+1.0	100	31	38	25	2.19	-0.20	1.35	17	0	5	18	9	4	se.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,850	22	70.9	+0.9	102	31	44	1	0.73	-2.00	0.29	16	0	6	19	9	3	s.	R. L. Williams.
Carson, 2 miles SW	Grant	2,500	35	72.2	+1.4	110	26	41	23	2.83	+0.84	1.21	5-6	0	7	13	18	0	se.	J. W. Evans.
Center	Oliver	2,100	9	70.0		105	31	43	23	1.90		0.83	16-17	0	8	13	18	0	se.	Fred L. Heinz.
Drake	McHenry	1,634	17	70.8	-0.8	103	31	45	23	1.02	-1.28	0.46	17	0	7	20	11	0	se.	Geo. A. Paulus.
Dunsmuir, 2 miles NNE	Rolette	1,682	51	67.8	+0.8	98	31	41	25	2.8	+0.21	1.08	17	0	5	21	9	1	se.	State Tuberculosis San.
Eckman	Botineau	1,500	41	68.4	+0.4	99	31	38	25	1.97	-0.39	1.37	17	0	6	17	12	2	se.	E. K. Sherman.
Fessenden	Wells	1,610	35	71.4	+2.0	102	31	46	25	1.56	-1.01	0.99	26	0	6	20	9	2	sw.	John V. Zuber.
Fort Yates	Sioux	1,670	47	72.4	-0.3	104	31	43	25	3.36	-1.28	1.25	6	0	7	20	9	2	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	26	70.2	+0.5	99	31	41	25	2.62	+0.69	1.55	16-17	0	8	18	7	6	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	71.6	+2.4	102	31	45	23	1.80	-0.69	1.10	16-17	0	6	13	12	6	se.	Mac H. Vorachek.
Granville	McHenry	1,504	40	70.9	+2.2	103	31	45	1	2.02	-0.25	1.35	8	0	6	25	5	1	nw.	Fred Roble.
Hansboro	Towner	1,597	39	66.7	+0.4	98	31	39	25	3.04	+0.50	1.00	10	0	6	9	20	2	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	44							4.23	+1.83	2.82	16	0	7	14	9	8	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	69.6		101	31	42	21	2.11		1.25	16	0	4	12	18	1	w.	John Dalmage.
Linton	Emmons	1,711	30	73.2	+0.5	103	31	45	25	1.49	-0.64	0.77	6	0	8	12	12	7	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	70.4	+1.5	100	31	45	1	5.28	+2.59	4.38	16-17	0	7	12	16	3	se.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	33	72.8	+0.9	105	31	50	11	1.25	-1.06	0.68	17	0	6	15	6	10	se.	No. Gt.

Climatological Data for July 1946—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Elbowoods	McLean	2,082	54	71.4	+1.5	101	31	40	23	2.25	-0.16	1.60	16	0	6	22	8	1	nw.	H. W. Case.
Epping	Williams	2,224	38	70.6	-0.2	97	26	41	23	4.45	+2.40	2.31	17	0	7	18	11	2	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	18	.....	.....	.....	.....	.....	.....	3.66	+1.38	0.76	9-10	0	8	23	8	0	se.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	29	71.6	.....	98	27	42	25	2.24	+0.02	0.49	13	0	9	24	6	1	s.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	6	69.0	-0.9	97	30†	39	25	3.17	+1.37	1.03	13	0	9	10	15	6	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	38	72.1	+4.7	98	26	40	23	3.01	+1.17	1.41	16-17	0	4	25	6	0	se.	L. D. Nielson.
Halliday	Dunn	2,073	5	.....	.....	.....	.....	.....	.....	2.09	.....	0.62	17	0	8	14	17	0	nw.	John Kisse.
Hettinger	Adams	2,675	40	72.3	+0.6	100	27†	40	25	2.14	-0.14	0.52	2-3	0	6	16	13	2	se.	Edgar Martin.
Kenmare	Ward	1,799	15	71.0	+1.7	99	29	46	23	3.86	+1.56	2.00	17	0	9	20	5	6	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	38	73.0	+1.8	99	27†	44	25	2.41	+0.50	0.87	8	0	6	17	11	3	nw.	S. P. Grane.
Medora, ¼ mi. W.	Billings	2,271	32	.....	.....	.....	.....	.....	.....	1.32	-0.57	0.56	13	0	6	28	3	0	.....	Harry Roberts.
Mott	Hettinger	2,424	40	72.4	+0.8	101	31	44	25	1.32	-0.81	0.55	3	0	5	14	16	1	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	55	72.6	+2.1	101	31	43	25	1.27	-0.86	0.55	6	0	8	9	22	0	se.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn	.....	5	71.0	.....	103	26	39	23	2.58	.....	1.10	13	0	11	23	7	1	se.	Peter F. Fieck.
Parshall	Mountrail	1,929	32	70.4	+0.8	99	31	42	1	2.48	+0.26	1.30	17	0	8	9	22	0	se.	C. E. Shubert.
Portal	Burke	1,954	33	69.3	+1.3	98	31	41	23†	2.42	+0.35	0.80	8-9	0	7	20	7	4	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	42	69.2	-1.9	95	26	40	25	2.82	+0.55	1.94	17	0	6	18	12	1	se.	E. J. Lewis.
Richardton, ¼ miles N.	Stark	2,467	31	71.7	+0.6	99	26†	46	25	2.80	+0.34	1.28	2	0	9	12	17	2	se.	Assumption Abbey.
Ryder	Ward	2,108	18	.....	.....	.....	.....	.....	.....	2.35	+0.13	1.63	17	0	7	24	4	3	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	21	69.4	-1.3	100	31	41	25	3.11	+1.09	1.07	17	0	9	14	15	2	.....	H. J. Bugge.
Stanley	Mountrail	2,258	9	68.0	.....	98	26	40	1	2.75	.....	1.17	17	0	5	11	18	2	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	18	.....	.....	.....	.....	.....	.....	2.28	+0.23	1.48	17	0	6	20	9	2	s.	Geo. N. Pilgard.
Tioga	Williams	2,279	18	.....	.....	.....	.....	.....	.....	3.02	+0.99	1.80	17	0	7	20	10	1	se.	L. A. Simon.
Trotters	Golden Valley	.....	21	.....	.....	.....	.....	.....	.....	3.30	+1.54	0.86	14-15	0	7	4	27	0	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	6	70.8	.....	99	31	43	25	2.81	.....	1.59	16-17	0	9	16	12	3	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	34	71.2	+0.1	98	26	42	23	3.78	+1.78	1.02	10	0	8	16	15	0	w.	J. C. Zeller.
Wildrose	Williams	2,258	17	.....	.....	.....	.....	.....	.....	2.56	+0.58	1.35	17	0	6	30	1	0	w.	Jonathan Winkjer.
Williston	Williams	1,878	68	71.9	+3.0	98	26	48	23	4.32	+2.43	2.12	16-17	0	8	9	22	0	se.	U. S. Weather Bureau.
Average for Western Division				71.0	+0.9	103	26†	39	23†	2.65	+0.59	2.31	17	0	8	17	12	2	se.	
Average for the State				70.6	+1.6	110	26	34	25	2.17	-0.26	4.38	17	0	7	16	12	3	se.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

† Trace, precipitation 0.005 inch or less.

‡ And other dates.

§ Best available used for stations not equipped with recorders.

Daily Temperatures for July 1946

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum...	73	75	80	86	74	78	81	81	86	74	76	84	90	76	79	84	82	82	82	81	85	69	70	78	86	89	87	90	93	98	81.8		
	Minimum...	49	58	60	63	60	61	53	58	59	54	49	54	55	57	51	63	68	57	53	52	50	56	51	47	40	56	61	56	65	71	56.4		
Bismarck Airport	Maximum...	84	83	85	90	78	79	86	88	93	79	81	90	95	82	87	92	83	80	85	85	86	92	72	76	82	96	93	90	96	97	104	86.7	
	Minimum...	53	64	62	58	61	64	58	63	64	58	49	60	65	66	59	68	65	62	55	56	53	61	53	55	50	62	70	63	62	70	66	60.5	
Bottineau	Maximum...	76	80	76	82	82	80	84	78	84	71	76	84	85	75	82	89	80	75	78	80	81	80	66	80	75	89	87	84	94	97	100	81.7	
	Minimum...	41	57	61	60	56	62	52	61	63	52	48	51	61	57	57	62	57	61	53	53	52	58	40	38	58	61	54	61	63	71	55.5		
Carson	Maximum...	82	81	84	87	75	93	86	85	85	80	92	90	80	85	92	88	80	86	87	85	91	74	75	96	110	97	88	95	90	102	87.4		
	Minimum...	51	56	60	56	62	57	55	58	59	58	45	48	62	61	58	65	62	59	50	53	51	58	44	57	46	59	62	60	65	69	57.0		
Crosby	Maximum...	81	83	76	81	86	81	91	90	88	72	81	91	83	85	88	83	82	75	79	81	84	76	74	68	81	97	88	89	93	96	96	83.8	
	Minimum...	44	51	59	54	48	59	61	62	60	56	49	58	61	58	60	60	57	56	56	55	53	61	41	45	42	49	56	50	55	62	69	55.1	
Devils Lake	Maximum...	76	80	82	87	84	79	85	86	86	71	76	83	89	77	84	89	82	80	80	80	84	85	70	74	77	89	93	88	93	92	98	83.2	
	Minimum...	48	52	62	62	58	60	58	61	65	59	52	55	65	60	55	59	65	59	55	57	55	57	49	47	51	55	62	57	56	67	73	57.9	
Dickinson Airport...	Maximum...	80	79	82	87	79	80	86	86	81	75	79	90	88	82	85	93	83	83	83	78	83	84	85	83	72	72	81	98	95	90	94	93	84.5
	Minimum...	50	59	60	58	60	60	55	62	57	54	49	58	61	56	60	64	58	59	54	57	54	56	45	53	44	59	64	60	58	69	65	57.4	
Dunn Center	Maximum...	84	84	81	87	85	80	86	87	87	80	79	88	90	79	87	93	87	86	82	80	84	88	75	76	82	94	90	90	96	95	98	85.6	
	Minimum...	46	55	59	57	56	60	51	67	59	57	47	54	63	56	61	63	59	61	54	54	52	61	45	50	46	53	60	59	61	65	69	56.8	
Fargo Airport	Maximum...	76	73	79	88	82	76	83	85	88	79	79	83	94	77	79	83	88	84	83	85	82	79	83	74	75	78	83	92	88	93	92	91	82.9
	Minimum...	49	56	64	66	63	64	63	58	66	61	58	63	65	58	57	61	69	63	55	54	53	54	52	47	50	57	63	65	62	69	73	59.6	
Fessenden	Maximum...	80	81	79	87	84	80	86	87	87	80	79	88	90	79	87	93	87	86	82	80	84	88	75	76	82	94	90	90	96	95	92	102	85.4
	Minimum...	48	58	61	61	56	61	54	59	67	56	49	54	64	59	51	60	63	61	54	55	53	59	47	48	46	60	66	58	60	73	73	57.4	
Fullerton	Maximum...	78	75	80	87	82	79	83	84	88	75	79	86	93	77	80	85	84	81	83	83	82	85	78	72	80	84	92	90	87	92	96	83.2	
	Minimum...	50	56	61	62	61	61	59	56	63	60	53	55	63	64	56	61	66	65	53	55	52	52	54	52	45	55	59	60	60	63	73	58.1	
Garrison	Maximum...	84	82	81	86	83	76	86	86	89	76	81	90	95	85	87	91	82	78	82	84	86	86	72	76	81	97	95	88	98	91	102	85.8	
	Minimum...	46	62	59	58	54	61	54	62	55	47	55	62	59	59	63	59	62	54	54	54	59	45	48	50	58	64	58	59	64	73	57.5		
Golva	Maximum...	87	81	85	87	84	83	90	86	79	73	82	95	80	85	87	86	82	76	82	83	86	77	71	72	84	96	92	95	95	97	97	85.0	
	Minimum...	43	51	51	55	50	52	46	57	54	52	46	56	57	53	60	64	56	54	53	51	48	52	41	49	39	55	58	54	58	67	59	52.9	
Grafton	Maximum...	74	78	83	87	87	82	86	85	85	85	77	82	94	85	81	88	88	88	80	83	84	87	73	78	88	91	88	93	95	94	84.9		
	Minimum...	46	51	60	64	58	59	58	59	68	58	56	62	58	52	56	69	58	55	52	52	54	52	43	48	50	61	57	51	63	69	56.5		
Grand Forks Airport.	Maximum...	74	81	82	87	83	79	85	86	88	77	78	83	94	77	81	81	88	85	84	79	81	83	71	72	76	87	91	86	92	95	92	83.2	
	Minimum...	46	55	61	64	60	58	61	65	58	56	52	63	69	57	56	63	58	54	52	50	53	47	43	48	52	61	57	51	65	71	56.7		
Jamestown Airport...	Maximum...	80	78	80	89	81	82	84	84	88	73	78	86	96	80	81	86	86	85	85	84	84	86	75	74	81	85	97	87	91	92	95	84.3	
	Minimum...	45	60	60	63	60	63	58	56	59	56	52	62	60	58	53	60	66	59	53	54	50	55	51	48	43	53	61	59	58	65	74	56.9	
Kenmare/	Maximum...	80	84	72	84	85	78	88	85	88	75	80	91	90	81	88	92	82	79	83	82	85	78	71	73	80	96	88	87	99	91	97	84.2	
	Minimum...	47	54	59	58	54	53	55	67	64	57	52	57	63	58	60	68	58	62	58	57	58	65	46	50	48	61	62	52	60	63	69	57.9	
Langdon	Maximum...	76	78	81	85	82	78	84	84	85	80	77	80	88	83	82	84	81	79	80	80	85	83	76	72	76	88	88	84	91	97	96	82.7	
	Minimum...	39	55	56	62	52	55	52	59	64	58	49	53	60	56	52	55	64	58	49	49	49	55	44	40	37	46	52	49	51	64	68	53.3	
Marmarth	Maximum...	85	80	85	86	85	82	90	86	85	75	82	95	90	86	88	92	85	83	85	86	87	87	72	75	85	98	99	95	97	98	99	87.2	
	Minimum...	53	53	60	57	56	60	58	62	62	57	60	58	61	55	64	67	63	63	54	53	50	61	54	52	44	57	64	58	64	75	68	58.8	
Minot Airport	Maximum...	80	82	77	85	85	74	86	82	87	74	78	90	88	90	80	88	90	81	78	80	79	85	79	68	73	80	95	90	87	96	90	101	83.5
	Minimum...	47	55	59	58	57	60	55	64	61	55	49	56	66	60	60	67	58	60	58	56	56	57	48	49	51	65	66	56	60	65	70	58.5	
Mott	Maximum...	82	80	84	88	77	80	86	88	84	81	82	92	91	83	85	94	92	88	94	84	86	88	76	74	82	96	96	93	94	94	101	86.9	
	Minimum...	52	56	60	56	61	58	54	61	60	58	46	56	64	59	60	68	62	61	60	51	49	61	47	50	44	58	60	61	60	65	74	57.8	
Pembina Airport	Maximum...	73	79	83	85	86	74	84	86	85	71	73	82	80	75	82	86	80	83	79	77	80	85	67	70	76	88	87	84	90	96	93	81.3	
	Minimum...	47	48	59	64	57	56	55	60	65	60	56	51	62	55	56	57	61	57	51	50	49	55	46	42	40	54	58	48	50	61	70	54.8	
Sharon	Maximum...	71	77	79	87	82	78	86	85	87	74	80	83	97	78	82	85	89	88	88	87	85	84	77	80	81	86	97	86	92	93	93	84.4	
	Minimum...	46	54	58	62	59	60	55	59	65	57	52	56	64	54	55	58	62	52	52	51	57	48	45	48	56	62	59	61	65	71	56.9		
Steele	Maximum...	79	78	79	87	79	79	81	83	87	83	77	85	93	77	81	86	82	78	81	81	82	87	78	72	79	90	89	86	94	92	102	83.5	
	Minimum...	45	57	60	56	60	62	53	59	63	56	47	52	62	63	55	63	63	63	62	52	50	60	43	47	44	58	68	59	59	65	73	57.1	
Valley City	Maximum...	79	77	78	94	85	77	82	83	87	75	77	83	93	75	79	84	87	83	83	81	83	78	73	78	83	93	86	90	90	95	83.0		
	Minimum...	48	60	62	62	60	63	60	59	64	57	55	53	61	64	55	59	69	64	55	54	51	52	50	49	48	52	60	62	56	70	58.0		
Wahpeton	Maximum...	78	78	81	87	87	82	80	85	88	87	78	83	92	92	78																		

Daily Precipitation for July 1946

[illegible]

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis. 10-24-46-1050]

51.05
NNT
55-8

Lat Hist

DEC 17 1946

UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LV BISMARCK, N. D., AUGUST 1946 No. 8

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

The temperature this month averaged 1.3° below the normal. It was warm at the beginning and cool at the close. The unseasonably low temperatures recorded on the 11th did but slight damage as was the case again on the 29th, when some local frost was reported. Rainfall has continued below the normal with damage to all late crops. Only two beneficial shower periods occurred. The heavy precipitation reported on the 26th from scattered areas in Steele, Traill and Grand Forks counties came as thunderstorms with more than 3.00 inches falling in a six hour period.

The amount of sunshine was normal, with the usually large number of clear days. The warmest day of the year occurred on the 6th at stations in the northwest portion. It was an ideal month for harvesting with 80 per cent of the small grain crop threshed or combined at the close of the month; yields and quality have been excellent. While scattered light hail occurred locally over the state, no serious damage resulted except for the severe storm on the 22nd which began in central Stark County and moved southward into Hettinger and Slope counties with heavy damage in New England and on both sides of Amidon. About \$35,000 damage occurred to windows, roofs, automobiles, etc. in New England, mostly on the north side. The storm occurred between 4 and 5 p.m. and covered an area 8 miles wide and 50 miles long. Hail varied in size from peas to three inches in diameter. Near Amidon all standing crops, including corn, were destroyed and buildings were damaged. Much poultry and wild game were killed. The estimated loss to farm buildings, crops and poultry was \$55,000.—M.S.C.

TEMPERATURE

The mean temperature for the state was 65.2° , or 1.3° below the 1892-1946 average for August. The mean temperature for the eastern division was 65.7° ; for the middle division, 64.8° ; and for the western division, 65.0° . The highest mean temperature was 68.5° at Wahpeton, and the lowest, 61.1° at Kenmare, making a range in mean temperature of 7.4° . The absolute range was 75° , from 104° at Carrington on the 2nd, and Dickinson on the 6th, to 29° at Golvea on the 29th. The average daily excess in temperature for the state since January 1, 1946, is 2.5° .

PRECIPITATION

The average precipitation for the state was 1.62 inches, or 0.46 inch less than the 1892-1946 average for August. In the eastern division the average amount was 1.93 inches; in the middle division, 1.70 inches; and in the western division, 1.23 inches. The greatest monthly amount reported was 6.04 inches at Sharon; the least, 0.27 inch at Fairfield. The greatest amount recorded in any 24 consecutive hours was 4.35 inches at Sharon on the 25th-26th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 2.48 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.32	29	29.55	7	11.1	37	w.	8	76	82	46	43	74	54
Devils Lake....	30.31	11	29.58	7	8.5	26	w.	8	73	84	46	47	59	87
Fargo.....	30.26	11	29.61	7	11.9	37	n.w.	18	76	86	49	46	67	66
Williston.....	30.35	28	29.44	6	7.3	30	w.	7	64	79	44	38	67	76

† And other dates.

COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	67.3	105	24	2.86	2.80	1.50	2.39	0	8	15	10	6	
1893...	66.7	109	29	2.10	1.25	0.58	1.31	0	3	20	7	4	
1894...	68.8	102	30	1.37	0.86	1.20	1.14	0	4	17	10	4	
1895...	64.5	104	24	1.87	1.36	1.48	1.57	0	5	17	11	3	
1896...	64.7	107	21	2.07	0.86	0.42	1.12	0	5	17	10	4	
1897...	64.1	106	29	1.28	1.13	1.13	1.18	0	5	15	10	6	
1898...	65.4	104	24	2.92	1.40	0.75	1.69	0	5	15	11	5	
1899...	65.2	97	32	2.90	2.90	2.69	2.83	0	6	15	11	5	
1900...	70.4	114	33	6.05	4.53	4.60	5.06	0	10	14	11	6	
1901...	66.9	100	32	2.55	1.90	0.86	1.77	0	6	18	8	5	
1902...	64.3	96	26	2.65	2.36	1.88	2.30	0	8	16	9	6	
1903...	63.7	103	35	4.72	4.65	4.67	4.68	0	10	13	7	11	
1904...	63.3	102	31	1.56	1.92	1.34	1.61	0	6	17	7	7	
1905...	67.5	107	34	3.51	2.44	1.34	2.43	0	7	17	8	6	
1906...	66.3	105	31	1.53	1.74	2.25	1.84	0	7	17	6	8	
1907...	64.5	104	26	2.17	1.23	1.79	1.73	0	6	18	9	4	
1908...	63.2	104	25	2.48	2.46	1.55	2.16	0	7	17	8	6	
1909...	69.8	109	27	2.98	1.94	1.78	2.23	0	6	18	9	4	
1910...	63.1	109	24	1.58	1.30	1.51	1.46	0	5	14	8	9	
1911...	62.2	98	23	3.61	3.87	2.15	3.21	0	8	12	11	8	
1912...	63.4	118	32	3.41	2.60	2.62	2.88	0	10	11	10	10	
1913...	68.9	106	30	3.15	2.32	2.42	2.63	0	6	16	10	5	
1914...	64.2	101	26	2.00	2.26	2.61	2.29	0	7	13	11	7	
1915...	64.4	100	19	1.16	1.49	0.89	1.18	0	4	19	8	4	
1916...	66.0	100	26	3.17	2.79	2.05	2.67	0	8	16	10	5	
1917...	65.2	105	25	0.96	0.74	0.76	0.82	0	4	17	10	4	
1918...	66.5	102	34	3.51	3.39	3.25	3.38	0	8	15	11	5	
1919...	67.9	101	30	2.58	1.57	0.63	1.59	0	5	18	10	3	
1920...	68.8	108	28	1.03	2.01	1.55	1.53	0	5	22	6	3	
1921...	67.2	108	31	3.08	1.86	0.99	1.98	0	6	18	10	3	
1922...	69.8	115	33	1.29	1.63	1.02	1.31	0	6	18	9	4	
1923...	63.0	97	28	2.38	1.70	1.45	1.84	0	8	14	12	5	
1924...	63.8	102	28	2.27	1.36	1.09	1.57	0	6	17	9	5	
1925...	67.9	110	29	1.39	1.06	0.66	1.04	0	5	20	8	3	
1926...	65.6	105	36	3.01	2.41	1.68	2.37	0	7	14	8	9	
1927...	63.4	96	28	3.17	3.63	2.58	3.13	0	8	18	8	5	
1928...	64.8	105	25	3.84	3.15	2.28	3.09	0	8	17	9	5	
1929...	68.5	106	26	0.87	0.83	0.60	0.77	0	4	20	9	2	
1930...	70.4	104	32	1.40	1.45	1.49	1.45	0	6	15	9	7	
1931...	67.0	105	30	2.43	2.33	1.51	2.09	0	6	16	9	6	
1932...	68.3	100	28	2.40	1.37	1.89	1.89	0	7	16	10	5	
1933...	68.5	104	31	0.81	0.64	0.79	0.75	0	5	17	9	5	
1934...	67.4	108	25	1.70	1.15	0.60	1.15	0	5	16	11	4	
1935...	66.2	109	26	3.83	1.90	1.32	2.35	0	8	16	9	6	
1936...	69.8	110	29	1.67	1.37	1.16	1.40	0	6	14	11	6	
1937...	72.9	109	40	2.56	1.11	0.88	1.52	0	5	18	10	3	
1938...	69.8	109	33	1.79	1.22	1.48	1.50	0	6	18	10	3	
1939...	68.6	105	32	1.94	2.37	1.98	2.10	0	7	18	9	4	
1940...	67.8	103	33	3.12	1.77	1.25	2.05	0	7	18	7	6	
1941...	68.8	111	32	3.44	2.63	2.52	2.86	0	10	11	14	6	
1942...	66.3	105	33	4.69	2.48	2.10	3.09	0	9	12	12	7	
1943...	67.7	104	31	2.60	2.52	2.71	2.61	0	9	16	10	5	
1944...	65.6	102	34	7.06	3.64	2.42	4.37	0	11	13	11	7	
1945...	67.1	105	32	1.84	2.10	1.10	1.68	0	6	16	11	4	
1946...	65.2	104	29	1.93	1.70	1.23	1.62	0	7	16	10	5	
Period	66.5	118	19	2.55	2.03	1.65	2.08	0	7	16	9	6	

NAT.
HIST.

Climatological Data for August 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	66.2		103	2	36	11	2.55		1.28	26	0	6	22	5	4	nw.	Albert Thoren.
Carrington	Foster	1,579	49	66.4	-0.7	104	2	39	12	2.53	+0.46	1.65	27	0	9	15	8	8	.....	Soo Line Agent.
Casselton	Cass	934	51	66.6	-0.5	100	2	39	11	1.37	-1.17	0.51	26	0	5	9	21	1	nw.	Joseph L. Farrell.
Cavalier	Pembina	894	39	65.8		102	2	36	28	1.32	-1.19	0.49	26	0	6	11	18	2	ne.	City Light & Power Co.
Colgate	Steele	1,180	13							1.36	-1.12	0.55	26	0	3	16	12	3	w.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	65.4	-2.0	99	2	40	11	2.18	-0.43	1.16	26	0	6	17	7	7	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	16							1.26	-1.14	0.78	25	0	4	21	8	2	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	71	64.8	0.0	99	2	39	11	0.99	-1.49	0.64	26-27	0	10	12	11	8	w.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	64.9	-2.8	100	2	34	11	1.44	-0.91	0.93	15	0	7	17	10	4	s.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	61.3	-3.5	96	2	31	11	1.45	-0.88	0.35	25-26	0	8	21	5	5	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	65.8	-2.9	95	2	40	28	0.99	-1.78	0.59	26	0	4	19	5	7	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	66.4	+0.3	98	2	37	28	1.76	-1.13	0.62	27	0	7	11	17	3	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	66.9	-1.3	95	2	37	28	0.87	-1.68	0.45	14	0	4	16	9	6	sw.	Art Waterman.
Fullerton	Dickey	1,439	49	66.4	-1.6	97	2	38	11	1.09	-1.45	0.41	26	0	4	16	12	3	nw.	F. O. Alin.
Gackle	Logan	1,951	16	66.9		100	2	39	29	1.06	-1.29	0.66	14	0	6	12	13	6	w.	Tony Martin.
Grafton	Walsh	827	55	67.4	+1.2	101	2	42	12	3.21	+0.69	1.53	26	0	9	15	10	6	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	66.6	+0.6	101	2	43	31	4.90	+2.28	3.27	25-26	0	7	13	9	9	nw.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	6	65.5		100	2	41	31	4.67		3.40	25-26	0	10	10	12	9	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	66.6	-4.1	100	2	35	28	0.62	-2.13	0.32	24	0	4	17	2	12	w.	Soo Line Agent.
Hannah	Cavalier	1,568	53	62.6	-1.5	96	2	37	11	1.70	-0.67	0.60	13-14	0	7	5	23	3	w.	A. E. Prior.
Hillsboro	Trails	901	41	67.0	-1.2	99	2	43	11	1.38	-1.37	0.42	14-15	0	6	12	15	4	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	65.6	-1.3	101	2	38	11	1.64	-0.91	0.87	14-15	0	5	18	8	5	e.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	6	64.8		98	2	36	11	2.16		0.73	14-15	0	7	18	7	9	w.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	65.7		102	2	34	11	1.31		0.82	25-26	0	3	17	8	6	nw.	U. S. Wildlife Refuge.
Laugdon, 1 1/2 mile SE	Cavalier	1,615	51	64.2	+0.5	100	2	36	11	1.53	-0.94	0.74	17	0	10	15	11	5	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	65.2	-0.7	100	2	42	28	1.77	-0.94	1.04	25-26	0	7	14	6	11	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	65.2	-2.6	96	2	39	28	1.21	-1.69	0.60	15	0	7	19	0	12	nw.	J. O. Halverson.
Mayville	Trails	975	51	68.0	+0.1	101	2	42	11	2.93	+0.38	1.66	26	0	9	14	10	7	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	63.8	-1.9	98	2	33	11	3.09	+0.77	1.99	25-26	0	10	17	6	8	nw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	67.0	-1.5	97	2	37	28	1.88	-0.82	0.80	15	0	5	21	6	4	sw.	J. G. Carlson.
McVille	Nelson	1,467	5																	C. W. McMillan.
Oakes	Dickey	1,318	18	67.6	-1.5	99	2	39	28	1.54	-1.13	0.75	14	0	6	20	5	6	s.	C. M. Hagen.
Park River	Walsh	998	43	66.2	-0.4	101	2	42	11	1.70	-0.60	0.70	17	0	6	18	9	4	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	64.1	-0.6	98	2	43	12	1.07	-1.22	0.39	25-26	0	9	7	15	9	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	64.0		99	2	39	11	3.06	+0.70	1.74	26	0	8	12	16	3	nw.	T. C. Overland.
Sharon	Steele	1,516	23	65.4	-2.5	99	2	38	28	6.04	+3.67	4.35	25-26	0	9	16	6	9	nw.	Hugh Lyon.
Valley City	Barnes	1,229	42	66.0	-1.7	97	2	39	11	1.50	-1.04	0.55	15	0	4	23	5	3	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	55	68.5	-0.2	96	2	41	28	0.91	-1.96	0.43	15	0	5	13	14	4	nw.	State School of Science.
Average for Eastern Division				65.7	-1.3	104	2	31	11	1.98	-0.62	4.35	25-26	0	7	15	10	6	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	63.4	-3.8	98	2	36	11	2.89	+0.45	1.64	13-14	0	11	15	11	5	nw.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	59.8		93	6	35	29	1.00		0.29	25	0	9	9	17	5	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	64.4	-1.3	100	2	37	11	0.80	-1.55	0.30	17	0	7	18	9	4	w.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	66.8	-1.4	98	2	42	31	1.00	-0.63	0.33	14-15	0	7	18	6	7	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	7	65.8	+0.1	100	2	40	30	1.12	-0.70	0.46	14-15	0	8	18	6	7	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	63.2	-1.7	95	6	39	30	0.97	-1.48	0.32	25	0	7	15	8	8	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,890	22	65.7	-1.5	95	6	38	11	2.99	+1.05	0.92	15	0	8	20	5	6	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	66.2	-2.4	99	2	33	29	0.81	-0.85	0.32	15	0	4	19	10	2	nw.	J. W. Evans.
Center	Oliver	2,100	9	64.4		101	2	35	10	1.58		0.41	25	0	9	11	18	2	nw.	Fred L. Heinz.
Drake	McHenry	1,634	17	65.0	-2.6	98	2	37	18	2.73	+0.71	0.95	26	0	8	20	11	0	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	51	63.6	-1.0	94	6	41	11	1.70	-0.66	0.92	25	0	6	14	13	4	nw.	State Tuberculosis San.
Eckman	Bottineau	1,540	41	62.4	-2.6	95	6	37	11	1.02	-0.86	0.35	26	0	6	17	7	7	se.	E. R. Sherman.
Fessenden	Wells	1,610	35	66.4	-0.3	98	2	40	10	1.86	-0.32	0.80	25-26	0	7	15	12	4	w.	John V. Zuber.
Fort Yates	Sioux	1,670	47	68.0	-1.7	101	2	37	29	2.40	+0.51	0.61	25	0	6	22	5	4	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	26	65.5	-1.1	99	6	38	11	3.07	+1.09	1.76	22	0	7	12	10	9	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	65.2	-1.4	98	6	41	11	2.00	+0.06	1.02	22	0	9	16	7	8	se.	Mae H. Vorachek.
Granville	McHenry	1,504	40	65.2	-0.5	98	6	39	11	1.93	+0.06	0.54	25	0	10	24	4	3	nw.	Fred Roble.
Hansboro	Towner	1,597	39	61.8	-1.7	95	2	32	11	0.72	-1.60	0.35	17	0	7	8	17	6	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	44							2.29	+0.10	0.94	26-27	0	8	17	6	8	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	63.9		99	2	36	11	1.66		0.63	17	0	5	9	16	6	w.	John Dalmage.
Linton	Emmons	1,711	30	67.6	-2.5	101	2	36	30	2.85	+0.27	1.20	13	0	8	13	8	10	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	64.9	-1.6	98	2	38	10	1.68	-0.63	0.72	25	0	8	11	14	6	nw.	Beuson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	33	67.0	-1.9	100	2	43	10	1.28	-0.30	0.41	15							

Climatological Data for August 1946-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer					
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy	Cloudy							
Western Division—Con.																									
Elbowoods	McLean	2,082	54	64.6	-3.3	102	6	34	30	1.48	-0.36	0.91	22	0	5	18	11	2	nw.	H. W. Case.					
Epping	Williams	2,224	38	65.9	-1.6	101	6	36	28	0.91	-0.73	0.60	22	0	3	24	6	1	nw.	T. Beachler.					
Fairfield, 9½ miles N.	Billings	2,650	18							0.27	-1.31	0.14	25	0	3	19	7	5	nw.	Mrs. Edith Larson.					
Fryburg, 2 miles N.	Billings	2,790	29	65.6		101	6	40	29	1.81	.00	0.55	12-13	0	6	24	1	6	s.	Verne King.					
Golva, 1 mile E.	Golden Valley	2,781	6	63.8	-3.4	101	6	29	29	0.82	-0.78	0.38	25	0	5	14	9	8	w.	U. S. Airway Comm. Sta.					
Grenora	Williams	2,114	38	67.0	+1.4	100	6	38	29	1.07	-0.43	0.43	22	0	7	20	11	0	e.	L. D. Nielson.					
Halliday	Dunn	2,073	5							0.65	.00	0.29	13	0	3	16	11	4	se.	John Kisse.					
Hettinger	Adams	2,675	40	66.6	-2.3	99	2	30	29	1.29	-0.25	0.53	3-4	0	7	18	8	5	nw.	Edgar Martin.					
Kenmare	Ward	1,799	15	66.1	+0.1	98	6	39	11	0.52	-1.39	0.39	26	0	5	19	3	9	se.	Theo. E. Eckberg.					
Marmarth	Slope	2,714	38	66.8	-1.4	99	6	33	29	0.97	-0.65	0.58	4	0	5	17	9	5	nw.	S. P. Grane.					
Medora, 1½ mi. W.	Billings	2,271	32							0.41	-1.11	0.33	25	0	3	24	2	5	se.	Harry Roberts.					
Mott	Hettinger	2,424	40	66.4	-1.6	96	2	35	29	0.99	-0.77	0.33	1	0	5	16	9	6	se.	Northern Pacific Agent.					
New England	Hettinger	2,621	55	66.6	-1.2	102	6	35	29	2.14	+0.56	0.79	25	0	7	12	16	3	nw.	Alfred Hasel.					
New Ireland, 1 mile E.	Dunn		5	63.0		100	6	30	29†	0.97	.....	0.38	22	0	6	21	6	4	nw.	Peter F. Fieck.				
Parshall	Mountrail	1,929	32	65.8	-0.2	100	6	38	4†	1.72	-0.12	0.43	22	0	10	11	17	3	nw.	C. E. Shubert.					
Portal	Burke	1,954	33	63.2	-1.6	99	6	35	29	1.51	-0.45	0.75	25	0	9	16	10	5	nw.	U. S. Customs Service.					
Powers Lake	Burke	2,205	42	63.6	-2.2	98	6	35	29†	1.10	-0.58	0.65	8	0	5	16	11	4	se.	E. J. Lewis.					
Richardton, 1½ miles N.	Stark	2,467	31	66.4	-2.1	98	6	39	29	1.38	-0.46	0.84	25	0	6	17	9	5	se.	Assumption Abbey.					
Ryder	Ward	2,108	18							1.98	-0.09	0.67	9	0	6	14	12	5	nw.	S. C. Schellenbaum.					
Sanish	Mountrail	1,835	21	63.9	-3.7	101	6	38	29†	2.01	+0.41	0.70	22	0	7	16	11	4	e.	H. J. Bugge.					
Stanley	Mountrail	2,258	9	61.3		98	6	35	29	2.21	.....	0.80	7-8	0	6	16	9	6	w.	Leroy Edwards.				
Tagus	Mountrail	2,179	18							1.49	-0.29	0.70	22	0	4	16	10	5	se.	Geo. N. Pilgard.					
Tioga	Williams	2,279	18							1.75	.00	0.85	8	0	3	18	8	5	sw.	L. A. Simon.					
Trotters	Golden Valley		21							0.64	-0.90	0.27	14	0	4	10	18	3	sw.	Walter Grunewald.					
Van Hook	Mountrail	1,864	6	65.0		100	6	38	29	1.51	.....	0.49	22	0	7	15	12	4	w.	H. Glenn Sims.				
Watford City	McKenzie	2,084	34	65.8	-2.5	102	6	38	29†	1.01	-0.59	0.38	22	0	5	19	11	1	nw.	J. C. Zeller.					
Wildrose	Williams	2,258	17							1.55	-0.26	0.61	8	0	8	27	2	2	nw.	Jonathan Winkler.					
Williston	Williams	1,878	68	66.0	-0.1	100	6	40	29	1.13	-0.34	0.83	22	0	4	14	10	7	se.	U. S. Weather Bureau.					
Average for Western Division										65.0	-2.1	104	6	29	29	1.23	-0.42	0.99	13	0	6	18	9	4	nw.
Average for the State										65.2	-1.3	104	2†	29	29	1.62	-0.46	4.35	25-26	0	7	16	10	5	nw.

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for August 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum..	89	98	82	73	80	85	84	81	75	71	73	78	78	85	84	83	78	71	82	85	80	78	77	73	69	71	60	61	68	75	81	77.7	
	Minimum..	58	57	54	43	40	58	47	44	48	40	36	46	55	55	56	55	52	47	43	46	57	54	53	55	56	60	43	39	40	41	42	49.0	
Bismarck Airport	Maximum..	91	100	83	82	84	94	83	74	74	74	76	81	84	90	84	88	80	74	87	90	83	82	84	78	76	69	63	68	72	78	81	80.9	
	Minimum..	63	57	57	47	49	61	59	51	52	44	42	53	58	60	57	51	62	53	45	51	58	58	52	56	60	53	49	47	46	40	43	52.7	
Bottineau	Maximum..	90	89	82	86	89	95	80	68	69	65	70	80	76	83	77	80	72	68	84	79	76	76	83	85	68	65	60	67	72	77	70	76.8	
	Minimum..	60	54	46	42	49	61	64	52	54	40	41	48	55	47	52	46	53	45	44	49	50	57	51	55	57	44	40	39	44	40	49.5		
Carson	Maximum..	92	99	86	78	84	96	82	73	77	78	78	77	90	90	82	90	88	70	93	93	85	85	86	84	80	68	63	68	70	80	83	82.1	
	Minimum..	55	50	50	58	48	56	59	49	54	42	43	52	57	53	52	54	57	51	44	56	54	57	50	57	49	52	45	43	33	39	42	50.2	
Crosby	Maximum..	91	81	80	88	93	101	74	68	76	71	78	82	86	82	73	87	69	73	86	86	81	80	85	86	72	58	60	66	72	79	68	78.5	
	Minimum..	60	56	47	45	50	58	57	50	52	44	38	46	55	49	50	44	44	50	45	53	46	51	53	55	59	52	39	42	34	38	42	48.5	
Devils Lake	Maximum..	90	99	82	84	89	93	83	70	68	65	71	79	75	87	82	84	77	68	84	82	75	74	82	85	72	73	60	64	72	77	78	78.0	
	Minimum..	64	63	54	48	57	60	63	57	54	45	39	46	49	62	59	50	57	48	45	47	52	52	48	53	56	52	47	45	43	45	42	51.7	
Dickinson Airport	Maximum..	89	91	79	80	86	100	81	68	72	76	77	82	84	87	83	93	76	75	86	92	86	80	74	69	61	54	61	67	75	78	78	78.8	
	Minimum..	53	60	51	53	50	58	53	52	54	49	47	55	59	55	53	52	49	51	47	53	55	55	53	59	61	49	45	45	39	43	46	51.7	
Dunn Center	Maximum..	89	88	81	84	88	101	79	69	75	77	81	83	86	88	81	92	75	75	87	94	87	81	86	82	70	63	57	66	72	78	79	80.4	
	Minimum..	57	52	48	45	51	53	61	53	54	41	43	52	53	53	52	43	45	44	45	46	50	53	50	58	58	46	46	42	39	42	49.5		
Fargo Airport	Maximum..	91	98	83	86	88	88	88	86	74	68	72	77	79	86	81	82	78	73	85	82	76	77	82	83	81	80	59	62	69	77	81	79.7	
	Minimum..	69	62	54	47	51	58	60	48	55	50	46	44	50	64	62	58	58	53	50	51	55	49	58	60	59	59	44	37	42	48	43	53.0	
Fessenden	Maximum..	99	98	83	84	88	95	90	80	71	63	74	82	80	90	87	85	81	72	85	85	79	71	81	85	78	72	65	64	70	76	76	80.3	
	Minimum..	63	59	53	50	54	60	64	52	53	40	41	44	54	61	59	51	59	51	46	49	50	52	63	53	54	58	46	47	45	46	49	52.5	
Fullerton	Maximum..	90	97	83	79	83	86	86	85	77	73	72	78	77	86	83	85	79	73	83	86	80	81	78	75	75	68	65	69	77	82	79	79.7	
	Minimum..	67	61	57	51	49	55	65	49	56	53	38	44	50	61	58	55	58	53	46	51	52	55	57	55	56	63	50	41	45	44	50	53.1	
Garrison	Maximum..	92	92	85	86	87	98	81	71	70	79	72	81	85	88	81	87	76	76	86	92	83	72	83	80	73	67	61	66	72	77	78	79.9	
	Minimum..	59	55	47	44	51	58	62	55	52	42	41	50	56	58	50	47	55	53	46	45	50	50	58	51	55	58	50	47	45	42	42	43	50.7
Golva	Maximum..	91	88	79	79	90	101	78	68	73	80	82	86	86	88	83	93	76	76	88	95	90	92	85	82	76	60	56	61	69	77	79	80.9	
	Minimum..	54	56	48	46	46	51	47	47	46	41	47	53	58	51	47	43	42	46	38	40	56	55	47	54	58	49	46	36	29	36	38	46.8	
Grafton	Maximum..	93	101	98	96	92	92	92	86	71	66	72	78	73	90	87	86	79	75	84	82	78	75	80	83	81	74	65	65	76	80	77	81.4	
	Minimum..	70	61	58	51	58	56	66	57	56	54	50	42	46	65	62	49	57	50	51	49	51	48	49	52	55	62	46	45	46	47	51	53.5	
Grand Forks Airport	Maximum..	90	100	84	85	90	90	87	80	71	66	73	77	77	90	86	80	75	72	84	78	73	76	81	83	81	74	61	64	73	77	74	79.1	
	Minimum..	68	61	53	48	50	58	60	49	56	54	44	43	48	64	61	51	55	51	49	50	53	47	52	57	56	55	43	42	44	47	41	51.9	
Jamestown Airport	Maximum..	89	98	82	85	86	88	85	76	76	70	73	78	75	90	85	88	79	73	84	86	77	75	80	78	73	74	61	63	71	77	80	79.9	
	Minimum..	65	58	53	45	46	55	57	47	54	45	36	43	49	60	59	51	58	50	46	48	52	52	56	56	55	54	45	42	41	47	41	50.5	
Kenmare/	Maximum..	92	87	83	90	88	98	78	67	75	69	76	82	82	88	79	86	73	75	90	85	80	78	85	85	75	63	59	70	77	82	75	79.7	
	Minimum..	62	65	51	51	58	63	63	54	54	45	39	47	57	55	50	48	50	48	50	52	50	52	48	55	53	58	56	59	44	47	41	48	51.5
Langdon	Maximum..	95	100	83	86	90	94	92	80	66	70	72	79	77	86	83	78	73	72	84	82	71	72	83	83	78	72	61	60	75	79	74	79.0	
	Minimum..	60	60	44	43	48	56	65	58	58	49	36	42	50	58	52	45	53	44	42	46	49	45	50	52	56	53	40	41	44	45	49.3		
Marmarth	Maximum..	90	95	90	75	88	99	84	73	74	83	81	86	85	90	85	96	85	78	88	96	90	92	83	82	80	67	59	64	68	76	83	82.7	
	Minimum..	53	53	53	54	53	55	58	47	55	45	50	58	61	49	48	52	47	50	40	44	59	62	55	55	67	55	53	38	33	36	42	51.0	
Minot Airport	Maximum..	91	88	81	87	88	98	80	69	69	66	74	78	83	86	79	84	73	73	85	85	80	75	81	83	78	72	63	57	65	70	77	73	77.8
	Minimum..	63	59	47	49	58	64	63	54	51	45	39	48	59	56	52	46	54	52	49	53	48	55	51	56	56	49	46	48	40	49	43	51.7	
Mott	Maximum..	95	96	87	80	84	94	92	85	72	78	81	82	89	89	87	91	88	79	89	92	89	84	89	82	74	72	61	63	70	79	81	83.0	
	Minimum..	56	54	56	52	44	48	51	45	45	47	45	56	59	52	51	46	56	52	43	46	57	57	48	54	60	58	45	48	35	39	40	49.8	
Pembina Airport	Maximum..	89	98	81	85	92	92	86	67	66	60	72	77	78	84	84	77	74	70	83	74	74	75	80	84	82	76	62	64	75	80	68	77.7	
	Minimum..	67	58	55	48	48	57	57	50	55	52	51	43	45	62	55	52	54	47	48	50	45	43	44	50	57	52	43	43	43	49	44	50.5	
Sharon	Maximum..	91	99	82	87	88	97	88	75	72	68	73	77	75	92	84	81	79	74	88	82	75	74	82	83	71	72	60	64	73	76	78	79.2	
	Minimum..	65	62	54	48	51	57	64	50	51	46	42	44	53	62	58	52	57	49	44	49	52	50	52	56	56	58	40	38	41	45	48	51.6	
Steele	Maximum..	88	98	80	79	84	91	81	71	73	69	72	78	81	88	82	84	79	72	83	87	79	77	82	79	69	68	61	65	69	73	78	78.1	
	Minimum..	57	58	53	44	45	57	62	47	54	42	37	49	55	55	54	49	61	51	42	47	52	56	50	52	55	59	45	45	39	44	50.4		
Valley City	Maximum..	88	97	87	83	85	87	86	85	74	67	70	75	75	87	84	82	79	76	86	84	81	78	76	81	76	77	70	63	70	75	80	79.7	
	Minimum..	68	59	58	44	51	55	55	49	53	52	39	42	51	59	60	53	59	54	45	50	56	51	56	58	56	62	49	41	45	48	52.2		
Wahpeton	Maximum..	92																																

Daily Precipitation for August 1946

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James	.10		.02											.01	.25		.01		T.					.01		.45	1.65	.03				2.53	
Casselton	Red.		.08	.03				T.	T.	T.					.09	.40				T.							.51	.34	T.				1.37	
Cooperstown	Sheyenne		.10						T.						.13			.33									.16	.32					2.18	
Courtenay	James	.02	.01						T.	.07	T.				.10	.02		.03	T.			.02					.08	.40	.24				1.26	
Devils Lake ^{1 5}	Devils Lake			.02						.02	T.				.21	.03											.40	.24					0.99	
Edgeley	James	.10	.05						T.	.10	T.				.35	.02		.25				.25				T.	.35	.30					1.44	
Edmore	Devils Lake			.03											.08	.57											.59	T.					1.45	
Ellendale	James			.03											.48	.22											.30	.62					0.99	
Fargo ^{1 5}	Red.			.03				.08	T.	T.					.33	.30			T.		T.	.08		T.			.15	.02					1.76	
Forman	Sheyenne														.13	.33	.30										.41	.05					0.87	
Fullerton	James														.14	.13	.66										.03	.03					1.09	
Gackle	do		.07													.02		.78	.02			.30					.15	.23					3.21	
Grafton	Red.		.04	.15				T.	T.	.14					.40	.08						.02	.20				.26	.34	.38					4.67
Grand Forks Airport ³	do		.01	.05					T.	T.	.13				.16	.07							.02	.20			T.	.15					0.62	
Hankinson ²	do			T.					.05	.10	.10				.60	T.		.40	T.			.30					T.	.15					1.70	
Hannah	Pembina									T.	T.				.07	.35		T.	T.			.16				.35	.28						1.38	
Hillsboro	Red.	T.		.17					T.						.01	.25	.53							.52	T.	.33	.42	.10					2.16	
Jamestown Airport ³	James		T.						T.						.02			.74	.01			.29	.20				.07	.20					1.53	
Langdon	Pembina		.09					.03	.04						.14				.01			.25					.08	.96	.26					1.77
Larimore	Red.			.07											.18	.60											.35	.28					1.53	
Lisbon	Sheyenne			.03											.04	.17		.28									.16	.43					1.77	
Mayville	Red.	.03		.05				.01							.01	.03	.30		.10			.26	T.				.18	.50					3.09	
McHenry	James	.08	.02	.02											.32	.80											.35	.02	T.				1.88	
McLeod	Sheyenne									.09					.75	.28											.35	.02	T.				1.54	
Oakes ²	James			.05					T.	T.					.07			.70				.28					.36	.28					1.70	
Park River	Red.	.01	T.						T.	T.					.02	T.	T.	.30	T.							.04	.35	.04					1.07	
Pembina Airport ³	do		.04	.01					T.	.11	.16				.02	T.	T.	.30	T.								.17	.19					3.06	
Petersburg	do		.01		.18										.26		.44	.08				.16					.17	.19					2.40	
Sharon	do		.03	.05					.03						.01	.51		.03					T.	T.			.60	4.35	.43					6.04
Valley City	Sheyenne	T.		T.											.55											.15	.32	.48					1.50	
Wahpeton	Red.			.08				T.		.01					.24	.43												.15					0.91	
Middle Division																																		
Ashley ³	Missouri		.02	.05	.02				.03						1.64	.01	.42						T.	.22	T.	.43	.01	.04					2.89	
Bisbee	Devils Lake							.10	.01						.01	.04		.30					T.		.10	.05	.24						.80	
Bismarck Airport ^{1 5}	Missouri	.03						T.		T.					.26	.43	.03							.03	T.	.18	.05	.11					1.12	
Bottineau ²	Mouse							.10	.06						.15			.12		.15						.32	.07						0.97	
Butte	do						T.	.12	T.						.07	.92	T.	.17					.15	T.	.65	.13	.78						2.99	
Carson	Heart							.12	T.						.14	.25	.32									.10							0.81	
Center	Missouri							.04							.13	.11	.18						.35	.11	.41	.04	.21						1.58	
Drake ²	Mouse	.10						.13							.33		.08	.09								.82	.95						2.73	
Dunseith	do							.46							.12	.04		.11	T.						.23		.92	.05					1.70	
Eckman	do							.14							.09		.07										.35	.10					1.02	
Fessenden	James							.06							.62		.09						.10			.15	.04						1.86	
Fort Yates	Missouri			.19											.34	.40	.56	.27								.64							2.40	
Foxholm	Mouse							.02	T.						.07	.14		.07	.08				1.76		.01	.97	.16						3.07	
Garrison ³	Missouri							.28							.07	.14		.02	.03						.33	.05	.06						2.00	
Granville	Mouse							.26	.03						.02	.14		.06					.16			.54	.45	.20					1.93	
Hansboro	Devils Lake	.07						.06	T.						.08	.12		.35				.03				.07	.01						0.72	
Linton	Missouri		T.		.03									.01	1.20	.18	.35								.48	.05	.05						2.35	
Maddock	Sheyenne		.07					.24							.14		.12	T.					.04			.65	.07	.35					1.68	
Mandan ²	Missouri									T.					.22	.41							.26	T.	.01	.30	.08	T.					1.28	
Max ²	do							.09							.05	.92		.18						.18	.28	.18							1.75	
McClusky	do							.02	.12						.04	.12	.18	T.						.60		.12	.22						2.30	
Minot Airport ³	Mouse		T.				T.	.07	T.						.26	.12	.01	.01					.70		.16	.51	.05						1.77	
Mohall	do	.04					.05	.10	T.						.02	.11	.02	.04	.03				.08		.09	.17	.08						0.83	
Napoleon	Missouri							.16	T.						.29	.16	.52						.01		.31	.03	.12						1.44	
New Salem	Heart							.24							.24		.22									.52	.01	.24						1.23
Pettibone	James							.03	.02						.06	.16		.33								.72	.32	.31						

57.08
NNT
55-9

Not Met

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LV BISMARCK, N. D., SEPTEMBER 1946 No. 9

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

Temperatures averaged near the normal, but they were quite variable, with an outstanding warm period from the 11th through the 17th. The first general killing frost occurred on the 28th and 29th, while light frost occurred at many places on the 1st and 2nd. Killing frost and freezing temperatures occurred in some central districts on these early dates. Rainfall was above normal, except at a few northwestern stations. This was beneficial for pastures, trees and shrubs, after the dry August. Some fall plowing was accomplished. The above normal rainfall interfered with the small grain and potato harvest, but this work was nearing completion at the close of the month. The outstanding feature of the month was the heavy precipitation in the east portion, where the greatest September amounts ever recorded were reported at Cooperstown, Courtenay, Edgeley, Hillsboro and Jamestown. At many stations, the greatest 24 hour rainfall in September occurred on the 17th-18th with the largest, 4.34 inches, at Edgeley. There were an unusually large number of cloudy days with sunshine averaging 12% below normal.—M.S.C.

TEMPERATURE

The mean temperature for the state was 56.3°, or 0.5° below the 1892-1946 average for September. The mean temperature for the eastern division was 56.3°; for the middle division, 56.4°; and for the western division, 56.1°. The highest mean temperature was 59.4° at Linton, and the lowest, 51.4° at Belcourt, making a range in mean temperature of 8.0°. The absolute range was 79°, from 97° at Epping and Grenora on the 14th, to 18° at Parshall on the 28th. The average daily excess in temperature for the state since January 1, 1946, is 2.2°.

PRECIPITATION

The average precipitation for the state was 2.52 inches, or 0.95 inch more than the 1892-1946 average for September. In the eastern division the average amount was 4.12 inches; in the middle division, 2.05 inches; and in the western division, 1.38 inches. The greatest monthly amount reported was 6.65 inches at Edgeley; the least, 0.39 inch at Tagus. The greatest amount recorded in any 24 consecutive hours was 4.34 inches at Edgeley on the 17-18th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 1.53 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)			Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	30.48	29	29.40	21	12.2	36	s.	16	79	83	55	55	61
Devils Lake...	30.49	29	29.33	21	8.8	27	s.	16	...	87	54	55	39
Fargo.....	30.48	29	29.34	22	13.3	36	w.	27	81	89	63	62	267
Williston.....	30.43	29	29.35	21	7.1	26	w.	16	80	81	53	48	292

† And other dates.

JAN 31 1947

UNIVERSITY COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	59.2	101	24	1.08	1.05	0.40	0.84	0	4	16	7	7	
1893...	57.1	102	8	0.75	0.75	0.94	0.81	0.1	4	18	5	5	
1894...	58.2	104	18	1.06	1.67	1.42	1.38	0	5	15	8	8	
1895...	56.6	100	12	1.29	0.61	0.42	0.77	0	4	12	12	6	
1896...	53.0	98	11	2.25	2.90	0.57	1.61	0	6	12	12	10	
1897...	64.1	109	18	0.24	0.25	0.35	0.28	0	2	20	3	3	
1898...	56.8	98	10	1.85	1.00	0.90	1.25	0	4	14	7	7	
1899...	55.0	101	11	0.60	0.57	0.57	0.58	T.	3	17	9	4	
1900...	54.6	98	17	5.15	5.26	4.44	4.95	T.	7	12	11	11	
1901...	53.6	100	12	2.41	1.80	1.82	2.01	T.	7	10	12	12	
1902...	53.6	95	15	1.24	0.54	0.44	0.74	0	4	16	6	6	
1903...	51.6	90	18	3.36	2.85	2.77	2.99	0.7	7	12	12	12	
1904...	54.7	96	18	2.12	1.18	1.00	1.43	0	5	14	9	9	
1905...	59.8	104	23	1.62	1.65	1.74	1.67	0	5	16	6	6	
1906...	62.8	109	20	1.54	0.73	1.07	1.11	0	4	19	5	5	
1907...	52.1	96	9	2.39	1.11	0.68	1.39	T.	6	14	8	8	
1908...	60.7	104	16	0.87	0.89	1.97	1.24	0.2	4	17	6	6	
1909...	59.0	93	24	1.03	0.77	1.04	0.95	0	4	16	6	6	
1910...	55.3	99	18	2.38	1.88	1.10	1.79	0.1	4	14	9	9	
1911...	54.9	95	21	2.32	2.41	2.38	2.37	T.	8	12	10	10	
1912...	51.5	101	18	3.54	2.50	1.82	2.62	0	10	11	6	13	
1913...	57.2	108	8	2.39	1.47	1.37	1.74	0.4	6	16	8	6	
1914...	59.3	98	25	1.24	1.00	0.84	1.03	0	5	16	8	6	
1915...	54.6	104	23	2.42	2.60	1.94	2.32	0	9	10	8	12	
1916...	55.1	99	15	2.12	1.07	1.10	1.43	T.	6	14	9	7	
1917...	56.4	97	16	1.53	0.93	0.65	1.04	0	5	12	9	9	
1918...	51.9	93	11	0.46	0.40	0.33	0.40	T.	3	15	9	6	
1919...	58.6	100	20	0.92	1.05	0.86	0.94	0.3	5	12	10	8	
1920...	59.0	99	19	3.94	1.19	1.49	2.21	T.	8	15	9	6	
1921...	57.0	101	25	3.91	3.37	2.34	3.21	T.	12	12	10	8	
1922...	59.8	104	23	2.42	2.00	1.89	2.10	0	6	16	8	6	
1923...	60.1	99	15	2.04	2.25	3.25	2.51	0	6	14	8	8	
1924...	55.0	98	20	3.68	1.91	0.68	2.09	T.	7	15	7	8	
1925...	58.1	103	20	4.18	2.23	1.61	2.67	T.	8	12	8	10	
1926...	52.3	95	9	2.80	2.44	1.66	2.30	0.5	9	11	9	10	
1927...	56.8	101	10	1.06	0.47	1.48	1.00	T.	3	16	9	5	
1928...	53.9	95	12	1.50	0.75	0.74	1.00	T.	5	17	7	6	
1929...	52.7	105	12	1.65	1.82	1.47	1.65	0	5	11	9	10	
1930...	56.2	98	10	1.02	0.88	1.17	1.02	0	4	16	9	5	
1931...	61.4	107	27	1.97	2.38	2.06	2.14	T.	6	18	7	5	
1932...	56.8	102	22	1.10	0.56	0.23	0.63	0	3	18	8	4	
1933...	60.9	101	22	1.03	0.71	0.70	0.81	0	4	16	8	6	
1934...	52.4	95	9	1.28	0.86	0.74	0.96	2.0	7	11	9	10	
1935...	57.2	105	16	0.73	0.44	0.12	0.43	0	3	15	9	6	
1936...	60.3	102	12	1.47	1.29	0.68	1.15	T.	5	15	10	5	
1937...	58.6	104	20	1.21	1.60	1.61	1.47	0.1	6	13	9	8	
1938...	61.9	99	21	0.95	0.34	0.61	0.63	0	4	17	7	6	
1939...	58.9	98	11	1.12	0.47	0.45	0.68	0.2	5	15	8	7	
1940...	62.8	103	20	0.87	0.98	1.32	1.06	0	4	17	9	4	
1941...	55.3	94	17	5.22	4.71	3.91	4.61	0.2	11	9	10	11	
1942...	54.0	99	4	1.71	1.62	1.67	1.67	2.7	9	12	9	9	
1943...	55.6	94	19	0.84	0.37	0.33	0.51	0	4	17	9	4	
1944...	56.4	91	21	1.32	1.55	1.50	1.46	T.	8	12	10	8	
1945...	54.5	103	14	3.18	1.73	1.50	2.14	0.1	9	11	9	10	
1946...	56.3	97	18	4.12	2.05	1.38	2.52	T.	8	11	9	10	
Period	56.8	109	4	1.94	1.47	1.30	1.57	0.1	6	14	8	8	

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Climatological Data for September 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear			Pt. cloudy	Cloudy
Eastern Division																				
Arvilla, 11 mi. N.	Grand Forks	960	3	56.3		87	16	28	2	3.87		1.99	18	0	6	14	9	7	nw.	Albert Thoren.
Carrington	Foster	1,579	49	56.6	-0.3	92	4	29	28	3.27	+1.85	1.34	18	0	9	3	9	18	.....	Soo Line Agent.
Casselton	Cass	934	51	57.2	-0.7	85	16	31	29	3.99	+2.09	1.28	18	0	8	5	18	7	se.	Joseph L. Farrell.
Cavalier	Pembina	894	39	55.7	+0.1	86	16	26	11	3.96	+1.64	1.96	17-18	0	4	3	18	9	se.	City Light & Power Co.
Colgate	Steele	1,180	13							4.27	+2.44	1.60	17-18	0	7	9	11	10	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	55.2	-2.5	84	15	29	29	6.40	+4.64	2.76	18	0	9	7	11	12	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	16							5.02	+3.18	1.73	18	0	12	12	10	8	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	71	56.0	+0.1	93	14	30	28	3.04	+1.41	1.63	18	0	9	6	11	13	s.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	56.8	-1.5	85	15	27	2	6.65	+4.99	4.34	17-18	0	9	11	13	6	s.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,524	23	53.2	-3.2	86	4	25	29	3.35	+1.50	1.10	17-18	0	9	17	5	8	sw.	Mike Davis.
Ellendale	Dickey	1,457	48	57.6	-1.2	85	15	32	2	4.44	+2.76	2.79	18	0	9	11	8	11	nw.	J. E. Demmer.
Fargo Airport, 24 mi. NNW	Cass	895	66	57.2	-1.0	83	16	31	29	3.35	+1.13	1.88	9-10	0	9	5	12	13	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	58.5	-1.0	86	15	31	29	3.33	+1.26	1.76	18	0	9	13	10	7	sw.	Art Waterman.
Fullerton	Dickey	1,439	49	57.2	-0.8	84	5	32	1	4.33	+2.37	2.39	18	0	11	9	13	8	s.	F. O. Alin.
Gackle	Logan	1,951	16	58.0	+0.2	89	4	30	1	4.75	+3.17	1.99	18	0	9	9	12	9	s.	Tony Martin.
Grafton	Walsh	827	55	56.8	-0.2	85	16	31	29	4.79	+2.63	2.54	18	0	7	10	11	9	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	55.4	-1.5	83	16	34	28	3.31	+1.39	1.45	17-18	0	7	6	10	14	nw.	University of N. Dak.
Grand Forks Airt. 24 mi. W	Grand Forks	834	6	55.2		85	16	31	29	3.13		2.48	18	0	7	4	9	17	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	56.6	-3.9	89	16	34	1	2.20	+0.10	0.90	10	0	5	13	5	12	.....	Soo Line Agent.
Hannah	Cavalier	1,568	53	55.2	+0.4	88	14	27	29	3.20	+1.09	0.80	17-18	0	10	2	20	8	w.	A. E. Prior.
Hillsboro	Trail	901	41	57.2	-1.8	85	16	34	2	6.60	+4.53	3.23	18-19	0	9	7	14	9	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	56.6	-0.4	85	4	32	2	5.56	+3.89	1.92	18	0	10	6	10	14	se.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,491	6	56.2		85	4	33	2	5.77		2.01	17-18	0	10	7	9	14	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	55.7		89	4	28	2	3.77		1.41	17-18	0	8	9	10	11	w.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	54.4	+0.9	89	14	27	29	3.27	+1.04	1.05	18-19	0	8	11	9	10	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	55.8	-0.6	85	16	33	28	2.96	+0.91	1.50	18	0	5	5	8	17	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	56.6	-1.5	85	15	32	29	3.50	+1.50	1.78	19	0	9	10	7	13	nw.	J. O. Halverson.
Mayville	Trail	975	51	56.9	-1.6	85	16	33	29	4.00	+1.94	1.72	17-18	0	10	12	12	6	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	54.6	-1.2	85	4	29	2	3.20	-1.77	1.47	18	0	11	8	11	11	s.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	57.1	-2.5	86	5	28	29	4.13	+2.10	2.42	18-19	0	6	11	9	10	ne.	J. G. Carlson.
McVille	Nelson	1,467	5																	C. W. McMillan.
Oakes	Dickey	1,318	18	57.8	-1.2	87	15	28	29	3.00	+1.24	1.49	19	0	9	13	10	7	nw.	C. M. Hagen.
Park River	Walsh	998	43	56.1	-0.8	86	16	31	30	4.73	+2.58	2.67	17-18	0	6	13	8	9	nw.	Martin Severson.
Pembina Airt. 1 mile S.	Pembina	795	73	54.6	+0.1	86	16	26	2	4.90	+2.72	2.51	17-18	0	10	3	12	15	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	54.4		88	4	29	28	4.25	+2.28	2.37	18	0	7	7	13	10	s.	T. C. Overland.
Sharon	Steele	1,516	23	55.2	-2.2	83	5	31	28	4.63	+2.58	2.73	18	0	12	8	11	11	s.	Hugh Lyon.
Valley City	Barnes	1,229	42	57.4	-1.4	85	16	32	28	5.52	+3.73	1.95	9-10	0	10	14	11	5	sw.	Miss I. C. Robertson.
Wahpeton	Richland	962	55	58.8	-1.2	86	5	32	29	1.92	-0.30	0.68	18	0	10	15	6	9	se.	State School of Science.
Average for Eastern Division				56.3	-1.2	93	14	25	29	4.12	+2.18	4.34	17-18	0	8	9	11	10	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	55.5	-2.4	86	15	32	1	4.17	+2.70	1.83	17-18	T.	13	10	10	10	se.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	51.4		90	14	22	29	0.75		0.41	18-19	T.	7	8	15	7	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	55.4	-1.3	93	14	28	28	1.44	-0.25	0.47	18	0	7	13	4	13	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	58.6	+0.5	92	14	30	28	2.15	+0.71	0.96	18	T.	9	11	9	10	nw.	U. S. Weather Bureau.
Bismarck Airt. 24 mi. SE	Burleigh	1,650	7	58.1	+0.8	93	14	28	28	2.23	+1.00	1.05	18	T.	10	11	9	10	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	55.4	-0.1	93	14	24	28	1.03	-0.56	0.70	22-23	T.	5	13	12	5	se.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	57.1	-0.4	89	14	29	28	1.71	+0.23	0.63	17-18	0	9	14	3	13	s.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	57.6	-0.5	94	14	27	28	3.07	+1.63	0.97	18	0	10	14	9	7	nw.	J. W. Evens.
Center	Oliver	2,100	9	54.7		87	14	22	28	2.75		0.93	9	0	9	11	13	6	nw.	Fred L. Hein.
Drake	McHenry	1,634	17	56.4	-1.2	92	14	27	28	1.55	+0.12	0.42	19	0	9	12	11	7	s.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	51	54.6	-0.4	91	14	26	29	0.71	-0.96	0.28	18	0	4	14	10	6	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	41	54.6	-1.1	96	14	21	28	0.53	-0.97	0.27	24	0	7	12	10	8	nw.	E. R. Sherman.
Fessenden	Wells	1,640	35	57.2	+0.6	94	14	28	28	2.80	+0.79	1.49	17-18	0	6	11	11	8	w.	John V. Zuber.
Fort Yates	Sioux	1,670	47	59.1	-1.1	92	14	31	29	3.36	+1.91	1.00	19	0	10	18	7	5	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,608	26	57.6	+1.4	94	14	28	29	0.44	-1.11	0.31	24	T.	4	8	11	11	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	56.4	+0.5	91	14	24	28	1.21	-0.25	0.29	8-9	0	9	10	5	15	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	40	57.3	+1.4	95	14	26	28	0.67	-0.89	0.31	18	0	7	19	5	6	nw.	Fred Rohle.
Hansboro	Towner	1,597	39	53.8	-0.4	92	14	25	2	1.42	-0.44	0.48	18	0	8	7	16	7	sw.	W. E. Disber.
Harvey, 3 miles SE	Wells	1,566	44							1.78	+0.35	0.60	18	0	8	12	8	10	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	54.1		94	14	28	2	1.92		0.70	17-18	0	8	9	11	10	w.	John Dalmage.
Linton	Emmons	1,711	30	59.4	-0.4	90	4	28	29	4.10	+2.53	1.79	18-19	0	12	13	8	9	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	56.6	-0.3	89	14	28	28	2.53	+0.87	1.26	18	0	9	6	11	13	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	33	58.1	-0.5	93	14	28	28	2.36	+0.90	0.97	18	0	9	13	2	15	sw.	

Climatological Data for September 1946—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours 4	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Ellsworths	McLean	2,082	54	56.2	-1.3	93	14	20	28	2.11	+0.62	0.96	9	0	9	15	10	5	nw.	H. W. Case.
Epping	Williams	2,224	38	57.4	+0.7	97	14	27	28	0.79	-0.50	0.31	17	0	7	18	2	10	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	18							1.61	+0.23	0.61	8-9	0	8	17	2	11	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	29	56.7		92	14	28	28	1.56	+0.22	0.46	9	T.	7	16	6	8	s.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	6	54.9	-2.5	95	14	21	28	1.11	-0.16	0.44	8-9	0	11	11	6	13	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	38	56.9	+1.6	97	14	30	28	1.39	+0.16	0.75	17	0	6	16	3	11	ne.	L. D. Nielson.
Halliday	Dunn	2,073	5							1.63	0.60	0.60	9	0	7	17	6	7	uw.	John Kisse.
Hettinger	Adams	2,675	40	57.2	-1.4	93	14	25	29	2.47	+1.17	0.81	17-18	0	10	16	3	11	nw.	Edgar Martin.
Kenmare	Ward	1,799	15	57.2	+1.0	96	14	30	29	0.87	-0.70	0.47	23-24	0	7	9	6	15	w.	Theo. E. Eckberg.
Marmarth	Slope	2,714	38	57.4	-0.4	92	14	25	29	1.59	+0.33	0.45	9	0	9	14	7	9	nw.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	32							1.55	+0.23	0.91	8-9	0	7	19	2	10	w.	Harry Roberts.
Mott	Hettinger	2,424	40	58.0	+0.2	94	14	25	29	1.57	+0.20	0.58	17-18	0	5	13	7	10	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	55	57.0	-0.4	93	14	27	29	1.46	+0.09	0.49	8-9	0	10	9	13	8	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn		5							0.79		0.36	9	0	7	15	6	9	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	32	56.2	+0.9	92	14	18	28	0.96	-0.53	0.24	13	0	9	7	20	3	nw.	C. E. Shubert.
Portal	Burke	1,954	33	53.7	-1.5	96	14	28	17	1.47	+0.01	0.70	25-26	0	7	9	12	9	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	42	56.0	-0.3	93	14	27	28	0.85	-0.44	0.50	23-24	0	5	18	5	7	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	31	57.6	-0.6	92	14	27	28	1.56	+0.24	0.51	8-9	0	9	14	6	10	sw.	Assumption Abbey.
Ryder	Ward	2,108	18							0.88	-0.64	0.27	13	0	6	9	10	11	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,855	21	55.0	-2.5	95	14	24	28	0.75	-0.59	0.19	23	0	8	9	12	9	w.	H. J. Bugge.
Stanley	Mountrail	2,253	9	53.8		94	14	23	28	0.81		0.59	23	0	3	10	12	8	uw.	Leroy Edwards.
Tagus	Mountrail	2,179	18							0.39	-1.01	0.29	23-24	T.	4	17	6	7	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	18							0.70	-0.58	0.30	23	T.	4	13	4	13	nw.	L. A. Shnon.
Trotters	Golden Valley		21							2.32	+1.09	0.60	9	T.	10	8	16	6	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	6	56.9		92	14	22	28	0.99		0.38	23-24	0	7	12	7	11	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	34	54.6	-3.1	95	14	25	28	1.74	+0.43	0.68	9	0	7	16	5	9	w.	J. C. Zeller.
Wildrose	Williams	2,258	17							1.63	+0.41	0.68	17	0	7	24	3	3	nw.	Jonathan Winkler.
Williston	Williams	1,878	68	56.4	-0.2	94	14	29	28	1.33	+0.21	0.70	16-17	T.	9	8	9	13	w.	U. S. Weather Bureau.
Average for Western Division				56.1	-0.8	97	14	18	28	1.38	+0.08	0.96	9	T.	8	13	7	10	nw.	
Average for the State				55.8	-0.5	97	14	18	28	2.52	+0.95	4.34	17-18	T.	8	11	9	10	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

⁴ Best available used for stations not equipped with recorders.

Daily Temperatures for September 1946																																		
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum..	70	64	77	85	81	74	60	53	51	73	67	74	76	81	86	80	70	60	65	70	75	52	45	52	76	70	54	51	63	66	.....	67.4
	Minimum..	32	33	41	56	54	44	41	46	47	43	40	49	57	51	59	59	60	44	42	39	46	40	34	33	41	38	33	32	32	38	.....	43.6
Bismarck Airport	Maximum..	73	71	84	90	81	66	62	58	51	76	74	82	85	93	90	87	76	58	65	75	74	52	47	60	76	70	54	56	65	73	.....	70.8
	Minimum..	33	36	43	61	50	43	45	47	47	43	45	53	61	56	62	69	58	48	42	47	42	36	36	41	41	34	28	29	46	.....	45.4	
Bottineau	Maximum..	65	70	83	85	80	53	62	62	70	76	71	76	85	93	88	85	75	57	58	70	69	54	40	58	62	56	57	57	60	72	.....	68.3
	Minimum..	31	35	38	57	51	44	37	39	42	41	37	41	48	54	54	61	62	53	47	41	40	41	40	38	31	35	38	45	24	29	39	42.4
Carson	Maximum..	75	75	88	90	78	73	60	56	54	75	78	85	88	94	88	88	78	63	65	74	71	53	42	63	76	68	60	58	67	73	.....	71.9
	Minimum..	31	33	45	56	55	39	42	44	44	40	42	48	51	55	61	64	56	44	36	32	45	38	35	34	44	43	40	27	33	42	.....	43.3
Crosby	Maximum..	68	74	88	83	75	49	61	61	71	78	82	86	89	96	93	87	57	59	52	70	61	42	40	64	64	47	44	58	63	80	.....	68.1
	Minimum..	29	28	35	47	53	43	40	39	37	42	42	45	46	48	53	60	53	44	42	30	33	35	36	34	36	37	33	30	30	33	.....	39.8
Devils Lake	Maximum..	62	68	80	87	81	57	60	51	63	76	70	73	83	93	84	85	73	60	63	65	71	54	46	49	70	64	51	57	59	68	.....	67.4
	Minimum..	35	33	47	58	56	44	40	38	42	42	38	48	56	58	65	65	60	48	46	42	51	44	36	36	42	36	37	30	33	41	.....	44.7
Dickinson Airport	Maximum..	70	72	86	83	74	61	55	52	49	72	77	84	85	91	90	88	66	53	62	74	68	46	41	64	73	70	53	58	65	77	.....	68.6
	Minimum..	38	37	50	60	52	44	42	45	44	43	44	49	53	53	61	59	49	42	37	35	45	35	35	33	47	43	34	27	29	39	.....	43.5
Dunn Center	Maximum..	70	73	87	84	77	59	58	52	51	73	78	83	85	92	89	88	67	55	59	72	66	44	42	63	71	69	46	57	66	77	.....	68.4
	Minimum..	32	29	35	43	57	45	44	42	47	45	42	42	49	49	49	66	58	48	40	32	32	36	38	36	37	43	43	24	25	38	.....	41.5
Fargo Airport	Maximum..	59	65	74	80	80	65	57	54	56	76	66	70	67	76	83	83	81	70	63	69	77	59	53	50	77	69	64	59	59	67	.....	67.6
	Minimum..	33	34	42	60	58	50	49	48	51	47	39	47	55	55	60	64	64	50	49	44	47	43	41	39	38	37	43	37	31	40	.....	46.7
Fessenden	Maximum..	66	70	83	83	82	65	60	55	57	78	72	78	85	94	85	86	80	68	62	70	69	61	46	51	74	67	60	58	67	70	.....	70.2
	Minimum..	33	32	45	59	57	46	42	42	44	42	42	42	46	56	56	55	64	63	49	44	41	50	42	35	34	39	38	34	28	32	.....	44.3
Fullerton	Maximum..	68	64	77	82	84	72	60	56	52	74	76	75	76	84	83	77	67	65	70	75	64	49	53	78	70	63	55	62	66	69	.....	69.1
	Minimum..	32	32	36	53	57	49	47	47	48	44	45	42	57	53	57	62	65	49	47	43	42	46	39	37	32	49	45	35	32	38	.....	45.3
Garrison	Maximum..	69	71	84	83	79	56	58	56	53	76	74	80	85	91	86	86	76	59	59	72	76	49	45	59	73	66	55	58	65	74	.....	69.1
	Minimum..	32	34	41	62	57	43	42	43	42	45	46	47	48	52	60	66	54	48	43	37	47	37	36	34	41	38	35	24	27	41	.....	43.7
Golva	Maximum..	72	74	91	82	73	61	54	53	54	72	81	86	89	95	91	87	61	54	62	74	65	43	48	68	71	74	52	59	69	85	.....	70.0
	Minimum..	28	29	46	53	47	39	43	46	44	44	40	43	49	45	53	55	49	39	34	29	43	34	34	32	46	43	34	21	22	31	.....	39.8
Grafton	Maximum..	62	65	77	83	81	76	75	57	63	75	68	76	72	78	84	85	83	72	61	68	71	69	53	51	70	65	61	60	56	66	.....	69.3
	Minimum..	36	36	37	53	52	47	42	45	32	42	35	44	56	57	59	64	66	52	48	42	47	46	44	37	40	36	36	32	31	35	.....	44.3
Grand Forks Airport	Maximum..	56	63	76	80	79	58	56	53	62	76	67	71	70	74	84	85	78	65	62	64	70	56	51	51	72	66	61	58	56	66	.....	66.2
	Minimum..	35	34	41	54	52	47	46	45	47	40	33	42	56	55	58	64	64	48	47	41	45	44	39	36	39	38	36	33	31	36	.....	44.2
Jamestown Airport	Maximum..	60	66	78	85	81	62	60	51	54	74	67	72	75	82	84	82	76	59	65	70	74	51	49	52	75	67	56	58	65	67	.....	67.6
	Minimum..	34	33	40	55	56	46	45	47	47	44	42	47	56	57	60	62	59	46	43	42	48	42	37	36	38	37	36	33	33	40	.....	44.7
Kenmare/	Maximum..	72	78	90	87	80	51	60	59	72	80	81	84	94	96	88	86	70	59	58	73	69	48	41	62	67	52	45	60	63	75	.....	70.1
	Minimum..	33	32	41	56	59	44	41	39	41	47	46	53	57	59	59	68	57	48	43	38	42	37	39	34	39	40	39	32	30	35	.....	44.4
Langdon	Maximum..	63	67	78	81	83	73	61	58	64	78	72	71	85	89	87	85	80	61	62	61	70	60	50	51	68	64	52	59	59	66	.....	68.3
	Minimum..	25	30	35	56	50	43	34	31	36	35	30	45	33	55	58	61	61	48	45	38	45	37	33	32	37	32	39	29	27	38	.....	40.0
Marmarth	Maximum..	75	75	88	91	75	73	65	68	56	71	69	86	86	92	90	87	83	55	68	73	71	51	51	68	76	72	62	59	69	83	.....	72.9
	Minimum..	29	33	45	49	55	39	45	48	46	48	39	44	48	45	54	55	54	47	45	43	41	35	35	31	43	47	44	27	25	32	.....	42.0
Minot Airport	Maximum..	67	71	83	85	78	55	59	58	63	78	75	80	88	91	87	86	74	56	56	73	68	50	44	56	69	64	53	57	64	74	.....	68.9
	Minimum..	33	33	49	62	55	46	43	42	44	45	45	51	60	58	65	68	52	46	43	40	50	40	33	33	45	37	30	28	27	42	.....	44.9
Mott	Maximum..	75	73	90	84	79	69	6	63	55	73	78	85	87	94	91	89	83	67	65	74	71	54	45	68	76	70	65	65	65	72	.....	72.7
	Minimum..	33	30	49	58	58	37	43	45	47	41	37	48	57	51	64	65	56	48	36	33	42	36	35	33	41	40	42	25	39	43	.....	43.2
Pembina Airport	Maximum..	56	65	78	78	72	56	62	53	67	72	70	73	80	81	84	86	80	64	62	62	73	54	48	51	67	62	55	59	58	66	.....	66.5
	Minimum..	35	26	38	52	51	45	41	36	39	31	32	44	57	57	58	65	62	49	44	42	44	45	37	36	40	36	38	29	31	36	.....	42.7
Sharon	Maximum..	62	66	76	80	83	64	58	51	58	77	67	68	74	76	83	82	72	63	63	66	67	59	48	51	74	64	57	58	58	67	.....	66.4
	Minimum..	33	34	41	52	55	46	43	47	47	41	36	47	55	56	57	59	60	48	46	41	45	45	37	35	36	39	40	31	31	35	.....	43.9
Steele	Maximum..	68	66	78	84	77	66	60	54	51	72	69	77	79	88	83	82	75	66	61	70	72	56	45	54	75	67	56	56	64	70	.....	68.0
	Minimum..	32	32	40	55	56	42	42	45	45	40	42	47	56	53	55	64	65	47	43	38	45	43	36	35	38	39	40	28	30	44	.....	43.9
Valley City	Maximum..	69	63	75	79	81	68	61	57	54	75	74	70	72	76	84	85	85	75	63	67	73	67	55	50	75	69	65	55	60	67	.....	69.0
	Minimum..	35	35	39	55	55	51	46	52	49	44	40	45	55	55	60	61	63	52	45	43	46	46	41	37	38	37	47	32	32	35	.....	45.7
Wahpeton	Maximum..	75	69	74	82	86	8																											

Daily Precipitation for September 1946

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James					T.	T.												1.34	.84	.09			.35	.15	.09	T.		.04					3.27
Casselton	Red.					T.			.07	1.19	.52			.14					1.28	.48				.17	.14	T.								3.99
Cooperstown	Sheyenne								.07	.64	.14			.21					.21	2.76	1.34				.58	.44	.08	T.						6.40
Courtenay	James								.02	1.35	T.			.31	.02	.02			.76	1.73	.07	T.	.30		.22	.13	.09							5.02
Devils Lake ^{1 5}	Devils Lake				.01	.16	T.		T.					.31					.50	1.63	.02				.39	.24	.01	T.		.08				3.04
Edgeley	James								.02	.68	.27		T.						.04	4.34	.66				.46	.10	.08							6.65
Edmore	Devils Lake				.21	.12			T.										.16	1.10	.66				.58	.27	.16	T.	T.	.09				3.35
Ellendale	James				.01		.02		.17	.84	.15								.24	1.45	.65				.39	.24	.01	T.						4.44
Fargo ^{1 5}	Red.				.02				.12	1.73	.16			.06					T.	1.12	.05	T.	T.		.04	.05	T.							3.35
Forman	Sheyenne				T.			T.	.19	.64	.09	.02		.05					.11	T.				.11	T.	.07								3.33
Fullerton	James				T.	.01			.17	.88	.16			.02		T.			.04	1.61	.78				.53	.06	.07							4.33
Gackle	do				.07			.07			1.52			.03					.19	.99					.63	.10	.10		.24					4.75
Grafton	Red.				T.	.02			T.	T.									.07	2.54	1.29				.57	.25	.05							4.75
Grand Forks Airport ³	do				T.				T.	T.					T.	T.			.14	2.48	.10	T.	.01	.24	.12	.04		T.						3.13
Hankinson ²	do							T.	T.	.32	.90			.02	T.	T.				.20	.76													2.20
Hannah	Pembina				.60		.05												.10	.80	.50	T.			.50	.25	.10	.10		.20				3.20
Hillsboro	Red.				T.					.75	.24			.57	T.				1.75	1.48					.18	.39	.07		1.17					6.60
Jamestown Airport ³	James				T.				.09	1.79	T.			.16					.93	1.97	T.		.01		.60	.13	.04		.05					5.77
Jangdon	Pembina						.05												.22	.98	1.05				.55	.18	.12		.12					3.27
Larimore	Red.																		1.50	1.21	.09				.13	.03								2.96
Lisbon	Sheyenne				.01					.19	.16				.03					1.21	.78	.03			.10		.08							3.50
Mayville	Red.								.38	.03				.09					1.72	1.14	.01			.26	.35	.01		.01						4.00
McHenry	James				T.	.02	T.			.07	.02								.22	1.47	.58	.05			.41	.26	.06		.04					3.20
McLeod	Sheyenne				.02				.15	1.40										2.42	.08					.06								4.13
Oakes ²	James				.02				.05	.12	.83									1.81	.49				.19	.02	.10							3.00
Park River	Red.				.23	T.			T.										T.	2.67	1.13				.60	.07		T.	.03					4.73
Pembina Airport ³	do				.27	.01	T.												.88	2.48	.28	T.			.53	.27	.02	.03	T.	.13	T.	T.		4.90
Petersburg	do				.05														.29	2.37	.60				.53	.30	.11							4.25
Sharon	do				T.				.01	.18	.02			.06	.02	T.	T.		.08	2.73	.95	.03			.47	.02	.06							4.63
Valley City	Sheyenne				.02				.11	1.35	.60			.10					1.60	1.26					.35	.06	.07							5.52
Wahpeton	Red.						T.		.17	.56	.03	.04		.25					.27	.41					.08	.04	.07							1.92
Middle Division																																		
Ashley ³	Missouri					.03	.11	.02	.16	.80	T.			.06					.51	1.70	.02		.10		.51	.10	.05							4.17
Bisbee	Devils Lake				T.														.06	.47	.33				.20	.13	.02		.23					1.44
Bismarck Airport ^{1 5}	Missouri					.02	T.	T.	T.	.54				.02					T.	1.05	T.		.16		.18	.15	.04		.05	.02				2.23
Bottineau ²	Mouse				T.															.24	.01					.40	.30		T.	.08	T.			1.03
Butte	do				T.		.05		T.											.63	.11	.03			.15	.16	.21		.22	T.				1.71
Carson	Heart				.02	T.			.10	.54				.44						.97			.10		.41	.13	.18		.18					3.07
Center	Missouri				.12				.10	.93										.68	.16	.34				.10	.20		.12					2.75
Drake ²	Mouse				T.	.14	.03			.06										.35	.42				.17	.05	.25		.08	T.				1.55
Dunseith	do				.03															.29	.18					.21			T.	T.				0.71
Eckman	do						.02		T.											.02		.08				.08	.27			.03	.02			0.53
Fessenden	James				.04	.18													.04	1.45					.26	.33								2.30
Fort Yates	Missouri					.08		.21	T.	.13	.22			.30						.65	1.00	T.			.50	T.	.17		.10					3.36
Foxholm	Mouse				T.	.02														T.	T.				.01	.10	.31		T.					0.44
Garrison ³	Missouri				.11				.02	.27				.18					T.	.25	.03		.11			.21	.03							1.21
Granville	Mouse				.11	.01														.27	.04				.02	.12	.10							0.67
Hansboro	Devils Lake					.04													.05	.48	.29					.31	.02	.01	.22					1.42
Linton	Missouri				.10		.02	.06	.37	.09				.28						1.70	.09		T.		.80	.11	.22		.26					4.10
Maddock	Sheyenne			T.	.21	.04		T.	.06	.38									.47	.82	.38				.23	.18	.05		.15					2.53
Mandan ²	Missouri				T.		T.	T.	.25	.48				T.						.46	.51	.01			.30	T.	.20		.14	.01				2.36
Max ²	do				T.				T.	T.	.44			.12						.63					.13	.06	.19							1.19
McClusky	do				.02	.08			T.	.01	.44			.08						.48	.25	.05		T.	.21	.06	.21		.08					1.92
Minot Airport ³	Mouse				T.	.04	.03		T.	T.									T.	.10	.03		T.	T.		.20	.06		T.	.01				0.47
Mohall	do				.01		.03																		.20	.17		.07	.12					0.77
Napoleon	Missouri					.06		.02	.10	.45	.16			.21					.03	1.37	.32				.55	.14	.20		.25					3.91
New Salem	Heart				.02		.06	.07	.82					.03						.77	T.		.29		.22	.29	.27		.08					2.92
Pettibone	James				T.				1.05	.07				.05					.05	1.32	.50	.18			.41	.11	.09		.05					3.88
Rolla	Devils Lake				.03															.50	.13				.05	.13			.21					1.05
Rugby	Mouse				.20														T.	.52	.23				T.	.05	.15							1.15
Selfridge	Missouri				.05	.05	.15	.05	.70					.50					.80	.70	T.				.40	.15		.10						3.65
Steele	do				.04				.08	.83	.10	T.		.19					1.61	.12	T.				.41	.13	.15		.18		.03			3.87
Towner	Mouse				.04	T.														.44	.10					.21								0.79
Turtle Lake	Missouri				.11				.04	.51				.08					T.	.64	.04				.22	.16	.09		.08					1.97
Tuttle	do				.04				.05	1.02				.19					.06	1.20	.17		T.		.32	.18	.08							3.31
Underwood	do				.14				.08	1.05				.30						.20					.24	.09	.10							2.20
Velva	Mouse				T.	.07	.02																											

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight

² Measured in the morning: for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 1-17-47-1050]

51.05
VNT
55-10

Nat Hist
FEB 25 1947
UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

MAR 3 1947 NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LV BISMARCK, N. D., OCTOBER 1946 No. 10

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The monthly temperature averaged 4° below the normal. It was the coolest October since 1932. Precipitation was heavy, occurring mostly in two periods from the 4th through the 13th and again from the 27th through the 30th. The outstanding feature was the early and heavy snowfall on the 7th, especially over the west and central portions. The average snowfall of 8.5 inches this October has been exceeded in only two other years, 1932 and 1919. This was the heaviest October snowfall ever recorded over the west portion and western areas of the central portion. Nine stations reported monthly totals of more than 20 inches. 28.5 inches of snow occurred at Dunn Center and 26.9 inches at Dickinson. The snow did not remain on the ground long, so no hardship was encountered and cattle continued in excellent condition. The heavy moisture did delay potato and beet harvest in the Red River Valley with some loss to the bumper potato crop, but it put the soil in excellent condition. There was an unusually large number of cloudy days with sunshine 23% less than normal over the west and 8% deficient over the east portion.—M.S.C.

TEMPERATURE

The mean temperature for the state was 40.1°, or 4.0° below the 1892-1946 average for October. The mean temperature for the eastern division was 41.8°; for the middle division, 39.6°; and for the western division, 38.9°. The highest mean temperature was 46.0° at Wahpeton, and the lowest, 34.4° at Belcourt, making a range in mean temperature of 11.6°. The absolute range was 89°, from 91° at Golva on the 1st, to 2° at Belcourt on the 12th. The average daily excess in temperature for the state since January 1, 1946, is 1.4°.

PRECIPITATION

The average precipitation for the state was 2.23 inches, or 1.23 inches more than the 1892-1946 average for October. In the eastern division the average amount was 2.08 inches; in the middle division, 2.26 inches; and in the western division, 2.36 inches. The greatest monthly amount reported was 4.04 inches at Marmarth; the least, 0.92 inch at Powers Lake. The greatest amount recorded in any 24 consecutive hours was 1.80 inches at Bowbells on the 5-6th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 0.30 inch. The average snowfall was 8.5 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.50	6	29.40	2	10.5	34	ne.	5	82	85	62	64	38	748
Devils Lake...	30.47	6	29.33	25	9.0	30	ne.	5	85	85	60	66	47	767
Fargo.....	30.42	7	29.36	25	12.0	33	s.	2	83	88	65	71	47	675
Williston.....	30.47	6	29.27	2	7.7	28	w.	3	77	83	59	60	33	756

† And other dates.

COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	47.2	95	7	0.25	1.20	0.30	0.58	T.	3	15	8	8	
1893...	40.6	79	0	1.17	1.08	0.89	1.05	0.9	5	11	11	9	
1894...	43.0	77	16	2.28	1.76	0.94	1.66	0.0	6	14	8	9	
1895...	40.5	85	-12	0.31	0.15	0.27	0.24	0.0	2	16	8	7	
1896...	40.2	88	5	1.25	0.43	0.40	0.69	0.0	3	14	8	9	
1897...	45.9	93	6	1.01	0.75	0.56	0.77	0.8	4	13	9	9	
1898...	38.8	84	8	2.60	2.42	1.67	2.23	4.7	6	8	8	15	
1899...	42.1	86	7	1.16	1.21	1.15	1.17	1.3	5	11	8	12	
1900...	48.2	87	14	2.34	1.30	0.98	1.54	T.	6	15	4	12	
1901...	47.5	88	11	2.96	1.22	0.65	1.61	T.	5	17	7	7	
1902...	43.7	87	10	1.70	1.20	0.95	1.28	0.7	4	16	6	9	
1903...	47.0	81	11	1.42	0.80	0.60	0.94	0.2	3	19	5	7	
1904...	46.6	87	10	1.55	0.60	0.46	0.90	T.	5	12	7	12	
1905...	40.3	93	0	0.59	0.22	0.28	0.36	1.2	5	8	12	11	
1906...	45.0	89	0	0.75	0.45	0.27	0.49	1.4	4	14	9	8	
1907...	44.4	88	4	1.02	0.66	0.16	0.61	0.2	3	21	5	5	
1908...	43.0	86	8	1.46	1.36	2.07	1.63	0.7	6	11	7	13	
1909...	43.1	97	0	0.88	0.63	0.45	0.65	0.9	3	14	8	9	
1910...	48.2	95	0	0.49	0.66	0.38	0.51	0.1	3	16	8	7	
1911...	42.5	86	-10	1.25	1.27	1.20	1.24	0.5	6	11	8	12	
1912...	44.4	90	0	0.68	1.09	1.44	1.07	3.5	4	16	6	9	
1913...	39.3	90	-2	2.40	1.34	1.03	1.59	0.7	4	12	9	10	
1914...	50.0	97	0	1.20	0.93	0.65	0.93	T.	4	16	8	7	
1915...	46.6	87	10	1.22	0.91	1.14	1.09	0.2	4	17	8	6	
1916...	40.0	85	-2	0.49	0.88	0.73	0.70	2.0	4	12	8	11	
1917...	34.7	82	-4	0.87	0.76	0.71	0.78	6.4	5	8	11	12	
1918...	46.2	90	4	0.80	0.45	0.35	0.53	0.8	4	14	8	9	
1919...	33.5	84	-18	0.93	1.14	1.35	1.14	9.3	6	11	9	11	
1920...	49.3	95	6	0.53	0.28	0.83	0.55	0.1	3	16	8	7	
1921...	47.3	88	16	0.80	1.09	0.10	0.66	T.	4	16	8	7	
1922...	45.7	98	8	0.37	0.65	0.73	0.58	2.3	3	15	7	9	
1923...	44.0	84	-8	0.56	1.02	1.08	0.89	0.5	4	14	7	10	
1924...	50.3	86	19	2.31	2.14	2.82	2.42	0.3	7	17	5	9	
1925...	33.3	66	-16	0.83	0.64	0.96	0.81	3.7	6	8	9	14	
1926...	42.6	85	4	2.54	0.86	0.68	1.36	1.0	6	10	10	11	
1927...	47.0	88	12	1.53	1.49	0.96	1.33	1.0	5	14	8	9	
1928...	43.5	85	3	0.69	0.18	0.51	0.46	0.6	2	15	8	8	
1929...	46.8	88	10	2.87	1.63	1.05	1.85	5.1	6	17	5	9	
1930...	40.8	86	0	2.04	1.90	1.48	1.81	0.3	7	10	9	12	
1931...	47.7	90	10	2.63	0.93	0.60	1.39	0.2	6	15	6	10	
1932...	38.3	90	-3	2.33	2.41	2.06	2.27	9.1	8	9	7	15	
1933...	41.5	88	5	0.39	0.48	0.74	0.54	1.7	4	14	8	9	
1934...	49.0	94	5	2.11	0.83	0.08	1.01	0.1	3	14	8	9	
1935...	43.5	86	-10	0.29	0.08	0.12	0.16	0.7	2	15	9	7	
1936...	42.3	90	-5	0.23	0.16	0.24	0.21	1.1	3	14	9	8	
1937...	43.9	94	1	0.40	0.92	1.08	0.80	0.2	4	12	9	10	
1938...	50.9	95	4	0.27	0.44	0.95	0.55	1.1	4	16	7	8	
1939...	41.3	84	-6	1.17	0.64	0.44	0.75	1.2	7	8	10	13	
1940...	50.7	89	18	2.16	1.26	1.26	1.56	T.	6	14	8	9	
1941...	44.5	81	0	1.78	1.24	0.94	1.32	2.0	5	13	9	9	
1942...	46.5	90	-3	0.55	0.41	0.42	0.46	1.8	4	14	8	9	
1943...	48.2	89	10	0.86	0.64	0.78	0.76	2.8	3	18	6	7	
1944...	48.7	84	11	0.25	0.08	0.02	0.12	T.	1	21	8	2	
1945...	45.1	89	6	0.28	0.86	0.48	0.37	T.	3	15	9	7	
1946...	40.1	91	2	2.08	2.26	2.36	2.23	8.5	8	10	8	13	
Period	44.1	98	-18	1.23	0.94	0.83	1.00	1.5	4	14	8	9	

NAT.
HIST.

Climatological Data for October 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1½ mi. N.	Grand Forks	960	3	41.2	.....	78	2	10	13	1.53	.....	0.62	5	0.8	8	16	8	7	nw.	Albert Thoren.
Carrington	Foster	1,579	49	43.2	-0.5	77	2	15	12	2.00	+0.97	0.73	8	7.0	7	6	8	17	.....	Soo Line Agent.
Casselton	Cass	934	51	43.5	-1.2	79	2	18	12	1.91	+0.56	0.98	5	5	8	8	14	9	nw.	Joseph L. Farrell.
Cavalier	Pembina	894	39	40.6	-2.4	71	2	17	13	2.12	+0.83	0.58	5	0.5	9	3	14	14	nw.	City Light & Power Co.
Colgate	Steele	1,180	13	.....	.....	.....	.....	.....	.....	2.00	+0.89	1.00	6	0	3	13	10	8	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	41.2	-3.5	77	2	15	12	1.50	+0.42	0.65	5	7	4	12	5	14	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	16	.....	.....	.....	.....	.....	.....	1.93	+0.78	0.55	7	7	8	17	6	8	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	71	40.2	-2.2	77	2	16	12	1.45	+0.20	0.55	7-8	4.9	10	10	5	16	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	41.2	-4.4	75	2	15	12	3.32	+2.30	1.46	4-5	0.2	9	10	11	10	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1½ miles W.	Ramsey	1,524	23	37.3	-5.2	76	2	10	12	2.07	+1.09	0.42	27-28	6.0	9	16	5	10	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	42.8	-3.1	76	2	16	12	2.86	+1.80	1.18	5	0	8	8	7	16	nw.	J. E. Demmer.
Fargo Airport, 2½ mi. NNW	Cass	895	66	43.4	-1.1	78	2	22	12	2.12	+0.43	1.11	5	7	8	5	10	16	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	44.6	-1.4	78	2	18	12	2.71	+1.36	1.26	5	7	9	10	9	12	sw.	Art Waterman.
Fullerton	Dickey	1,439	49	43.0	-2.3	75	2	17	12	3.13	+1.80	1.16	5	0.8	9	13	5	13	s.	F. O. Alin.
Gackle	Logan	1,951	16	40.8	-4.6	74	2	15	12	1.86	+0.90	0.66	5	3.8	9	10	12	9	sw.	Tony Martin.
Grafton	Walsh	827	55	42.0	-1.8	76	2	19	14	2.27	+1.13	0.53	6	7	9	14	8	9	sw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	43.1	-0.6	76	2	24	13	1.62	+0.26	0.78	4-5	7	8	10	6	15	nw.	University of N. Dak.
Grand Forks Apt. 2½ mi. W	Grand Forks	834	6	41.3	.....	77	2	21	13	1.35	.....	0.82	5	7	8	8	8	15	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	43.7	-2.9	79	2	18	12	2.13	+0.76	0.95	5	0	4	10	6	15	sw.	Soo Line Agent.
Hannah	Cavalier	1,568	53	37.7	-3.1	78	2	12	12	3.03	+1.96	0.85	5-6	11.0	7	3	22	6	sw.	A. E. Prior.
Hillsboro	Trall	901	41	43.4	-1.8	77	1	23	13	1.80	+0.46	0.80	5	7	6	7	12	12	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	42.3	-2.4	76	2	17	12	2.04	+0.75	0.74	4-5	7	5	14	2	15	sw.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE	Stutsman	1,494	6	41.0	.....	75	2	15	12	1.77	.....	0.88	7	0.1	9	7	6	18	w.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	40.5	.....	74	2	11	12	1.80	.....	0.68	5	1.0	6	11	6	14	sw.	U. S. Wildlife Refuge.
Langdon, 1½ mile SE	Cavalier	1,615	51	38.6	-2.3	75	2	11	12	2.23	+1.20	0.56	29	9.8	13	12	6	13	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	41.2	-2.9	75	2	14	13	1.44	.....	0.00	3.7	1.0	6	2	12	17	sw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	43.4	-1.3	77	2	16	12	2.58	+1.34	1.08	5	7	9	11	3	17	nw.	J. O. Halverson.
Mayville	Trall	975	51	43.4	-2.6	77	2	21	12	1.50	+0.24	0.67	4-5	7	9	9	9	13	w.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	39.8	-3.5	76	2	13	12	1.79	+0.74	0.86	7	0.3	7	11	6	14	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	43.2	-3.3	78	2	15	12	1.98	+0.60	1.10	5-6	0	7	11	6	14	n.	J. G. Carlson.
McVille	Nelson	1,467	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. McMillan.
Oakes	Dickey	1,318	18	43.0	-3.0	80	2	15	12	2.89	+1.58	1.11	8	0.8	8	15	4	12	s.	C. M. Hagen.
Park River	Walsh	995	43	41.2	-2.5	76	2	15	12	2.31	+1.13	0.64	6-7	7	5	14	6	11	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	39.5	-2.1	77	2	17	12	2.61	+0.31	0.44	7-8	1.5	12	5	12	14	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	39.8	.....	74	2	15	12	2.08	+0.91	0.80	5	3.8	7	12	8	11	nw.	T. C. Overland.
Sharon	Steele	1,516	23	41.1	-2.5	75	2	14	12	1.94	+0.65	0.82	5	0.2	8	15	4	12	sw.	Hugh Lyon.
Valley City	Barnes	1,229	42	43.4	-1.7	77	2	24	12	2.22	+0.90	0.83	4-5	7	10	14	5	12	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	55	46.0	-1.0	78	2	18	12	2.13	+0.69	1.33	4-5	0	7	15	4	12	sw.	State School of Science.
Average for Eastern Division				41.8	-2.5	80	2	10	12	2.08	+0.85	1.46	4-5	1.4	8	10	8	13	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	39.8	-4.6	74	2	16	12	2.46	+1.40	1.05	7	0.5	9	7	6	18	w.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	34.4	.....	77	2	12	12	1.77	.....	0.45	7-8	9.8	8	6	11	14	nw.	Turtle Mt. Indian Agency.
Bisbee	Towner	1,601	44	38.6	-5.2	75	1	12	9	12	+1.13	0.95	5	9.6	6	16	5	10	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	42.0	-3.2	79	2	20	12	2.25	+1.34	0.63	4-5	7.5	10	8	3	20	nw.	U. S. Weather Bureau.
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	7	40.9	-2.7	79	2	18	12	2.04	+1.10	1.02	4-5	7.6	11	8	3	20	nw.	U. S. Weather Bureau.
Botineau	Botineau	1,638	55	36.5	-4.9	80	2	11	12	1.81	+0.84	0.85	5-6	7.8	5	11	12	8	se.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	40.8	-4.0	79	1	20	8	3.49	+2.52	0.85	5-6	25.5	10	13	3	15	sw.	R. L. Williams.
Carson, 2½ miles SW	Grant	2,500	35	41.5	-3.0	84	2	17	8	3.18	+2.27	1.45	4-5	11.5	10	12	4	15	sw.	J. W. Evans.
Center	Oliver	2,100	9	38.9	.....	81	2	13	12	3.13	.....	1.10	4-5	11.0	9	9	12	10	nw.	Fred L. Heinze.
Drake	McHenry	1,634	17	38.7	-4.4	82	1	19	12	2.88	+1.73	0.85	6	15.0	8	12	5	14	w.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	51	37.2	-4.4	79	2	9	12	1.11	+0.25	0.60	5	3.8	6	11	10	10	w.	State Tuberculosis San.
Eckman	Botineau	1,500	41	36.8	-5.4	82	1	11	12	2.10	+1.26	1.10	5-6	11.5	6	12	8	11	nw.	E. R. Sherman.
Fessenden	Wells	1,610	35	40.7	-2.6	78	2	14	12	1.95	+0.89	1.43	4-5	5.3	5	11	9	11	n.	John V. Zuber.
Fort Yates	Wells	1,670	47	43.2	-3.5	78	2	18	12	2.31	+1.32	0.84	4-5	7.0	9	17	4	10	nw.	P. J. Jacobson.
Foxholm, 6½ miles NE	Ward	1,609	26	40.3	-2.6	87	1	18	12	1.97	+1.09	0.61	5-6	14.5	9	7	9	15	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	39.4	-3.8	82	2	15	8	2.85	+1.99	1.10	5-6	18.0	9	8	6	17	s.	Mae H. Vorachek.
Granville	McHenry	1,504	40	39.8	-3.8	83	1	15	8	2.29	+1.45	0.50	5-6	10.4	10	16	6	9	s.	Fred Roble.
Hansboro	Towner	1,597	39	37.0	-4.3	78	2	11	12	1.42	+0.38	0.56	5-6	10.0	9	7	12	12	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	44	.....	.....	.....	.....	.....	.....	1.94	+0.87	0.80	4-5	14.0	8	10	6	15	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	39.2	.....	78	2	13	12	2.05	.....	0.67	5-6	11.8	8	8	13	10	sw.	John Dulmage.
Linton	Emmons	1,711	30	43.4	-2.1	78	1	17	12	2.46	+1.42	1.19	5	4.3	12	11	4	16	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	40.8	-2.7	77	1	10	12	2.00	+1.02	0.44	5	8.8	10	7	10	14	nw.	Benson Cy. A. & T. Sch.
Mandan, 1½ miles SW	Morton	1,750	33	41.0	-3.7	80	2	17	1											

Climatological Data for October 1946—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Elbowoods	McLean	2,082	54	39.8	-5.0	85	2	17	12	2.17	+1.37	0.80	5	10.0	6	15	6	10	nw.	H. W. Case.	
Epping	Williams	2,224	38	39.6	-2.5	88	1	19	8	1.32	+0.55	0.50	5-6	12.0	7	8	9	14	nw.	T. Beachler.	
Fairfield, 9½ miles N.	Billings	2,650	18							2.15	+1.31	0.86	4-5	15.3	8	12	7	12	w.	Mrs. Edith Larson.	
Fryburg, 2 miles N.	Billings	2,790	29	39.0		88	1	13	8	3.65	+2.68	1.34	4-5	19.0	15	8	7	16	uw.	Verne King.	
Golva, 1 mile E.	Golden Valley	2,781	6	37.6	-6.9	91	1	6	8	1.96	+1.06	0.74	5	14.0	11	6	6	19	w.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	38	41.0	-1.1	80	2	20	11	1.87	+1.08	0.65	5	5.5	6	13	9	9	w.	L. D. Nielson.	
Halliday	Dunn	2,073	5							3.10		1.40	4-5	20.3	7	13	8	10	nw.	John Kisse.	
Hettinger	Adams	2,675	40	39.4	-6.7	85	1	15	8	3.39	+2.68	1.50	4-5	5.5	12	16	4	11	uw.	Edgar Martin.	
Kenmare	Ward	1,799	15	39.4	-4.1	83	1	17	7½	2.42	+1.46	1.52	5-6	12.0	4	8	9	14	w.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	38	40.2	-5.8	89	1	18	8	4.04	+3.25	1.06	5	22.0	14	8	6	17	nw.	S. P. Grane.	
Medora, 1½ mi. W.	Billings	2,271	32							2.35	+1.57	1.23	4-5	15.0	6	16	4	11	w.	Harry Roberts.	
Mott	Hettinger	2,424	40	40.4	-4.0	88	2	15	8	1.60	+0.77	0.63	4-5	5.7	6	10	4	17	uw.	Northern Pacific Agent.	
New England	Hettinger	2,621	55	39.7	-4.4	86	1	13	7	3.50	+2.71	1.53	6-7	13.0	12	10	9	12	nw.	Alfred Hasel.	
New Hradec, 1 mile E.	Dunn		5	35.8		83	1	9	7	3.78		1.60	4-5	24.0	13	9	12	10	sw.	Peter F. Fieck.	
Parshall	Mountrail	1,929	32	38.6	-5.8	84	2	15	7	2.09	+1.34	1.32	5-6	8.9	11	6	19	6	sw.	C. E. Shubert.	
Portal	Burke	1,954	33	38.6	-2.9	86	1	10	7	1.43	+0.59	0.75	4-5	23.0	3	8	15	8	sw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	42	38.6	-5.9	82	2	16	7	0.92	-0.13	0.40	9	4.5	6	14	6	11	se.	E. J. Lewis.	
Richardton, 1½ miles N.	Stark	2,467	31	39.9	-4.7	84	1	13	8	3.57	+2.78	1.20	5-6	18.5	10	13	1	17	sw.	Assumption Abbey.	
Ryder	Ward	2,108	18							1.90	+1.10	0.85	5-6	7.5	6	10	3	18	nw.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	21	38.8	-5.4	86	2	18	12½	2.23	+1.46	1.30	5-6	9.7	6	6	10	15	w.	H. J. Bugge.	
Stanley	Mountrail	2,253	9	35.7		83	1½	8	7	1.64		0.49	6	12.2	8	10	12	9	sw.	Leroy Edwards.	
Tagus	Mountrail	2,179	18							1.46	+0.68	0.80	5-6	13.0	5	12	7	12	w.	Geo. N. Pilgard.	
Tioga	Williams	2,279	18							1.52	+0.71	0.60	5-6	6.2	5	12	10	9	sw.	L. A. Simon.	
Trotters	Golden Valley		21							1.61	+0.81	0.90	5-6	7.2	8	4	16	11	sw.	Walter Grimewald.	
Van Hook	Mountrail	1,864	6	39.6		84	2	18	8	2.01		1.27	5-6	4.1	9	9	10	12	w.	H. Glenn Sims.	
Watford City	McKenzie	2,084	34	39.6	-4.6	89	1	14	8	2.80	+1.93	0.87	5-6	17.7	12	5	13	13	w.	J. C. Zeller.	
Wildrose	Williams	2,258	17							1.49	+0.69	0.73	6	14.3	6	17	8	6	sw.	Jonathan Winkjer.	
Williston	Williams	1,878	68	40.7	-2.7	89	1	23	8	1.63	+0.77	0.59	5-6	10.5	9	4	7	20	sw.	U. S. Weather Bureau.	
Average for Western Division				38.9	-5.1	91	1	6	8	2.36	+1.53	1.80	5-6	14.0	9	10	8	13	nw.		
Average for the State				40.1	-4.0	91	1	2	12	2.23	+1.23	1.80	5-6	8.5	8	10	8	13	nw.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
⁴ Best available used for stations not equipped with recorders.

Daily Temperatures for October 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	70	74	62	60	44	42	33	47	46	39	33	41	43	54	40	38	52	54	58	65	71	61	64	53	52	44	38	43	37	49	54	50.4	
	Minimum	41	48	34	33	39	29	24	23	30	29	17	16	33	30	26	21	26	25	22	31	34	27	35	32	35	25	27	29	28	29	24	29.1	
Bismarck Airport	Maximum	77	79	63	58	45	40	31	43	50	39	36	43	39	56	42	38	54	59	65	70	74	66	61	55	52	46	36	38	37	45	53	51.3	
	Minimum	44	54	36	32	35	26	23	19	29	33	19	18	27	25	30	29	27	26	25	32	32	28	38	33	38	35	32	33	33	29	27	30.5	
Bottineau	Maximum	78	80	52	60	42	44	34	35	45	41	30	40	42	42	35	39	52	55	60	65	63	62	58	50	50	46	44	36	35	42	45	48.5	
	Minimum	42	51	40	23	28	29	20	21	22	32	21	11	18	21	24	20	19	24	28	30	30	21	23	21	23	17	25	28	22	15	11	24.5	
Carson	Maximum	80	84	65	55	45	38	34	46	50	40	32	40	58	46	35	52	55	65	68	66	75	67	58	50	50	40	37	40	35	45	50	51.6	
	Minimum	46	53	44	34	32	30	21	17	31	30	25	26	27	27	20	26	35	28	33	35	38	31	43	30	37	32	30	30	30	24	28	31.4	
Crosby	Maximum	88	81	51	57	42	39	29	37	43	36	36	33	37	48	36	41	51	54	59	64	60	65	57	52	47	40	37	36	38	41	46	47.8	
	Minimum	40	43	39	26	25	28	11	12	20	31	24	22	22	24	24	24	21	24	25	28	32	28	32	27	30	21	21	28	25	26	21	25.9	
Devils Lake	Maximum	73	77	57	59	48	39	34	40	50	44	34	40	43	44	40	37	52	54	62	67	71	65	61	53	50	42	39	35	35	36	46	49.3	
	Minimum	45	53	38	32	37	29	25	27	34	34	20	16	25	25	32	29	30	29	26	42	36	34	39	33	30	27	26	31	31	26	25	31.2	
Dickinson Airport	Maximum	85	81	57	48	41	33	29	40	40	34	29	37	39	54	35	35	49	55	60	65	66	64	53	50	44	38	35	36	33	41	45	46.8	
	Minimum	44	48	34	33	30	14	13	10	33	28	20	24	29	28	28	30	27	29	28	35	35	32	34	31	34	31	29	29	27	22	28	28.9	
Dunn Center	Maximum	85	82	58	48	45	35	32	37	43	38	33	34	38	53	48	38	51	56	61	65	66	66	59	52	46	42	40	36	35	38	38	48.4	
	Minimum	37	53	42	28	32	30	15	13	28	31	26	19	30	26	28	30	27	30	23	31	31	31	34	30	37	33	31	30	31	20	21	29.3	
Fargo Airport	Maximum	73	78	68	61	48	53	46	47	50	47	41	38	42	46	40	39	50	54	58	64	71	65	70	58	54	46	45	41	40	50	55	52.8	
	Minimum	48	54	42	32	46	37	29	33	35	38	29	22	26	34	31	26	31	28	26	37	38	32	46	36	35	29	27	35	33	32	25	34.0	
Fessenden	Maximum	77	78	70	59	58	38	35	40	47	43	38	41	38	46	42	37	52	56	63	69	70	66	63	54	50	42	35	35	40	48	51.0		
	Minimum	41	49	46	30	36	32	23	23	29	47	43	38	41	38	46	32	27	29	31	25	38	33	31	25	31	35	29	23	30	29	25	30.4	
Fullerton	Maximum	71	75	67	60	52	45	40	48	46	45	40	39	46	55	49	39	51	58	57	67	68	63	66	56	50	49	42	42	40	51	56	52.7	
	Minimum	42	52	51	38	44	36	26	32	34	29	17	31	35	35	34	34	30	26	30	31	33	38	37	35	36	27	34	33	33	27	33.4		
Garrison	Maximum	81	82	60	52	44	37	31	38	46	37	34	41	44	55	40	37	52	59	63	66	67	68	57	54	54	42	36	36	35	39	44	49.4	
	Minimum	40	49	37	28	33	28	22	15	26	32	21	20	29	24	30	30	26	28	25	36	34	31	39	26	36	30	30	30	32	25	22	29.5	
Golva	Maximum	91	78	58	46	41	38	28	39	47	37	34	44	42	56	34	38	50	56	65	66	68	67	54	51	47	35	34	35	34	40	44	48.1	
	Minimum	40	45	28	30	30	12	10	6	35	28	22	29	28	28	28	22	23	23	37	32	26	34	31	34	31	34	31	30	25	24	19	23	27.2
Grafton	Maximum	70	76	76	61	58	48	45	45	54	51	45	36	40	44	42	39	54	51	59	69	70	64	60	57	53	48	44	37	37	42	50	52.4	
	Minimum	45	51	51	31	42	38	32	31	31	42	29	20	24	19	36	25	27	31	21	30	32	33	37	36	28	27	24	21	32	31	27	31.7	
Grand Forks Airport	Maximum	72	77	64	62	49	47	41	44	53	48	37	38	41	41	42	39	53	52	58	66	69	63	55	53	44	41	39	35	51	53	61.5		
	Minimum	45	53	38	30	42	31	29	32	32	36	27	22	21	25	26	34	31	26	23	33	32	32	39	32	27	26	28	33	32	31	26	31.4	
Jamestown Airport	Maximum	71	75	63	60	45	43	36	48	53	46	36	40	46	50	40	38	54	59	61	69	71	66	65	56	52	45	38	39	38	47	54	61.4	
	Minimum	43	51	37	30	40	29	23	26	31	32	19	15	32	32	27	26	30	30	25	30	32	32	38	34	32	25	26	32	32	32	23	30.5	
Kenmare	Maximum	83	79	54	63	42	40	30	40	45	37	38	37	42	46	36	42	52	56	59	64	62	65	57	55	50	43	38	35	40	44	49	49.1	
	Minimum	45	48	42	31	37	31	17	17	25	33	23	21	25	21	26	27	27	27	30	34	38	36	38	33	34	24	28	28	27	26	29	29.8	
Langdon	Maximum	72	75	74	59	52	39	35	39	56	50	40	41	44	45	37	39	51	52	58	62	64	64	57	52	51	47	37	35	33	34	35	49.4	
	Minimum	43	48	44	25	37	32	25	28	29	36	25	11	17	21	32	20	27	25	25	35	34	28	36	31	26	19	25	38	35	45	49	50.5	
Marmarth	Maximum	35	57	61	50	44	39	32	47	49	40	48	45	45	60	46	37	42	56	64	68	63	66	55	50	51	38	35	38	35	45	49	50.5	
	Minimum	38	49	56	58	47	33	31	32	45	30	30	25	30	30	30	30	22	24	22	30	28	26	34	34	34	38	32	30	28	25	24	29.8	
Minot Airport	Maximum	43	48	37	31	32	25	19	23	33	30	21	21	27	25	29	29	26	32	30	42	39	36	41	32	33	28	26	29	30	27	26	30.4	
	Minimum	43	48	37	31	32	25	19	23	33	30	21	21	27	25	29	29	26	32	30	42	39	36	41	32	33	28	26	29	30	27	26	30.4	
Mott	Maximum	83	88	70	55	47	39	34	44	49	44	36	43	43	57	54	38	50	55	63	68	75	68	59	58	50	41	38	36	37	44	50	52.1	
	Minimum	40	53	46	30	30	28	22	14	30	32	26	20	30	26	30	28	26	24	22	28	28	26	31	28	32	32	30	30	30	18	23	28.8	
Pembina Airport	Maximum	69	77	63	60	50	41	42	43	56	49	35	35	45	46	40	39	54	50	57	68	66	65	55	50	43	42	35	34	36	46	49	49.8	
	Minimum	44	52	35	28	39	32	30	30	30	35	27	20	18	19	29	25	28	26	21	31	32	32	40	30	25	20	17	31	31	22	25	29.2	
Sharon	Maximum	70	75	67	63	52	44	35	45	54	47	39	43	35	42	40	39	54	52	60	68	71	66	62	56	53	46	37	39	35	45	52	51.3	
	Minimum	43	48	48	29	39	34	25	28	31	35	27	14	21	25	32	22	29	29	28	35	36	30	39	34	29	27	26	31	31	30	23	30.9	
Steele	Maximum	70	75	65	53	39	35	43	52	45	35	44	38	58	46	38	53	59	61	69	73	65	62	54	49	48	34	36	36	44	53	51.8		
	Minimum	41	42	54	45	38	32	20	24	29	33	26	15	33	30	31	26	27	25	26	32	33	25	38	28	31	28	27	31	28	27	23	30.7	
Valley City	Maximum	72	77	75	63	60	46	40	48	53	48	46	40	37	47	47	40	53	54	57	64	69	64	64	65	55	51	49	49	40	48	55	54.1	
	Minimum	41	49	50	33	41	37	27	26	28	38	28	24	28	31	31	25	34	30	27	32	29	34	37	35	35	33	27	33	34	30	27	32.7	
Wahpeton	Maximum	74	78	76	67	60	65	47	54	59	51	46																						

Daily Precipitation for October 1946

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James			T.		.20	.62	T.	.78	T.	.06	T.	T.		T.							T.											2.00
Casselton	Red.					.83	.15	.34	.26	.16	.14			.02		T.																	1.91
Cooperstown	Sheyenne			T.		.65	.09	.35	.41		T.			.02																			1.50
Courtenay	James					.33	.28	.55	.54					.02																			1.93
Devils Lake ^{1 5}	Devils Lake			.01	T.	.34	.11	.54	.01	.01	.01	T.																					1.45
Edgeley	James			T.		1.46	.18	.80	.53	.23	.06	.02		.03		.01						T.											3.32
Edmore	Devils Lake			T.		.22	.35	.21	.39	.06	.10	T.				.02																	2.07
Ellendale	James					1.18	.12	.84	.45	.07	.11			.04																			2.86
Fargo ^{1 5}	Red.					1.11	.02	.31	.05	.45	T.	T.		.03		T.																	2.12
Forman	Sheyenne					1.26	.18	.52	.43	.03	.22	.01		.08																			2.71
Fullerton	James			T.		1.16	.14	.82	.40	.42	.02	.03		.08																			3.13
Gackle	do					.66	.30	.52	.24		.03	.01		.02		T.																	1.86
Grafton	Red.			.05		.42	.53	.07	.44	T.	.37	T.																					2.27
Grand Forks Airport ³	do			T.		.82	.04	.22	.08	.06	.04	T.				T.																	1.35
Hankinson ²	do			T.		.95	.55		.48		.15	T.																					2.13
Hannah	Pembina			T.			.85	.25	.65		.20																						3.03
Hillsboro	Red.			T.		.89	.20	.33	.32	T.	.14	T.																					1.80
Jamestown Airport ³	James			T.		.08	.65	.04	.88	T.	.02	.01	T.		.04	T.																	1.77
Langdon	Pembina			.02		.15	.37	.09	.39	.02	.12	.02				.07																	2.23
Larimore	Red.					.31	.25	.37	.33		.10																						1.44
Lisbon	Sheyenne					1.08	.17	.51	.54	.10	.10	.02		.03		T.																	2.58
Mayville	Red.					.67	.12	.26	.34	.01	.06	T.		T.		T.																	1.50
McHenry	James					.33	.23	.41	.45			T.		T.																			1.79
McLeod	Sheyenne					1.10	.35	.25			.14	.04		.02																			1.98
Oakes ²	James					.64	.84		1.11	.04	.09	.04		.07																			2.89
Park River	Red.					.42	.32	.64		.53	T.	T.																					2.31
Pembina Airport ³	do			T.		.26	.16	.20	.24	.09	.22	T.	T.		.08	.01																	1.51
Petersburg	do					.80	.34	.29	.33		.09																						2.08
Sharon	do			.02		.82	.19	.45	.38		.02																						1.94
Valley City	Sheyenne			.01		.83	.18	.52	.51	.03	.04			.06																			2.22
Walhapon	Red.			.04		1.33	.20	.21	.18	T.	.12																						2.13
Middle Division																																	
Ashley ³	Missouri			T.		.32	.70	.01	1.05	T.	.16	.10		.01		.07		T.															2.46
Bisbee	Devils Lake					.95	.10	.08						.03																			2.12
Bismarck Airport ^{1 5}	Missouri					.14	.98	.07	.38	T.	.02	.06	.03	T.		.04		T.	T.														2.04
Bottineau ²	Mouse						.85		.40		.14	T.																					1.81
Butte	do			T.		.30	.85	.37	.33	T.	.25	.10		T.																			3.49
Carson	Heart					1.45	.40	.50			.02	T.		.05		.11																	3.18
Center	Missouri			T.		1.10	.44	.45	T.		.17	.05		.08																			3.13
Drake ²	Mouse					.10	.85	.02	.65		.05	.05																					2.77
Dunseith	do					.60	.03	T.	.04	T.	.11																						1.11
Eckman	do						1.10		.35		.20	.05																					2.10
Fessenden	James					1.43		.02		T.	.03																						1.95
Fort Yates	Missouri			.05		.84	.25	.60			.08	.02																					2.31
Foxholm	Mouse					.42	.61	.24		.08	.29	.15	T.																				1.97
Garrison ³	Missouri			T.		.86	.31	.52	T.	.02	.11		T.		.07																		2.85
Granville	Mouse					.32	.50	.32	.13	.12	.32																						2.29
Hansboro	Devils Lake					.18	.38		.27	.09	.07																						1.42
Linton	Missouri			.05		1.19	.27	.56	.06		.06			.06		.02																	2.46
Maddock	Sheyenne					.44	.30	.31	.21	.02	.05																						2.00
Mandan ²	Missouri			T.		.81	.70		.58		.04	T.		.01		T.																	2.56
Max ²	do						T.	.80	.12		T.	T.																					1.44
McClusky	do					.21	.87		.50		.04	T.																					2.62
Minot Airport ³	Mouse					.82	.17	.44	.01	.11	.13	.01	T.	T.	T.	T.																	2.00
Mohall	do					.40	1.36	.24	.19	.06																							2.65
Napoleon	Missouri			.03		.58	.23	.50	.12		.06			.05		.05																	1.77
New Salem	Heart					.89	.20	.39	T.	T.	.03		.03		.02																		2.21
Pettibone	James			.02		.61	.09	.40	.22		.15			T.		.05																	1.55
Rolla	Devils Lake					.08	.66	.22	.26	.15		T.																					2.03
Rugby	Mouse																																

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CLIMATOLOGICAL DATA

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F. J. BAVENDICK

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GENERAL SUMMARY

The temperature for November was 1.4° below the normal with a cold period from the 16th to the close of the month. The coldest day was the 22d when all stations had sub-zero readings, the lowest -22° at Bottineau. Precipitation was light, except in the southeastern counties, where heavy rains for November occurred on the 7th. There was little or no precipitation over the rest of the state until the 20th when light snowfalls were general. Sleet was reported on the 20th and 28th with glaze on the 19th, 20th, 21st, 23d, 24th and 26th. This caused some inconvenience to traffic, with streets and walks slippery and dangerous. Sunshine was 10% below normal over the northwest, but was about 8% above normal over the other sections of the state. The smaller streams and ponds froze over early in the month, while the Missouri River froze on the 21st. At the close of the month, the Missouri River ice was 7.0 inches thick. Normal outdoor activities were not hampered greatly by the weather, and there was a greater than normal amount of construction in progress for this season of the year. More than the usual amount of fall plowing was accomplished in the southeastern part of the state.—M.S.C.

TEMPERATURE

The mean temperature for the state was 25.3°, or 1.4° below the 1892-1946 average for November. The mean temperature for the eastern division was 25.7°; for the middle division, 24.5°; and for the western division, 25.6°. The highest mean temperature was 30.2° at Marmarth, and the lowest, 18.6° at Belcourt, making a range in mean temperature of 11.6°. The absolute range was 90°, from 68° at Bowbells on the 5th, to -22° at Bottineau on the 22d. The average daily excess in temperature for the state since January 1, 1946, is 1.2°.

PRECIPITATION

The average precipitation for the state was 0.35 inch, or 0.25 inch less than the 1892-1946 average for November. In the eastern division the average amount was 0.57 inch; in the middle division, 0.19 inch; and in the western division, 0.29 inch. The greatest monthly amount reported was 1.83 inches at Fullerton; the least, 0.02 inch at Elbowoods, Medina and Moffit. The greatest amount recorded in any 24 consecutive hours was 1.55 inches at Fullerton on the 6-7th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 0.55 inch. The average snowfall was 3.3 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.67	30	29.56	23	9.9	38	nw.	28	81	85	59	69	60	1117
Devils Lake...	30.73	30	29.54	15	9.1	24	n.	21	81	63	72	51	1236	
Fargo.....	30.67	30	29.58	23	12.8	37	nw.	21	87	91	74	79	53	1129
Williston.....	30.68	30	29.54	14	6.7	25	se.	17	79	84	68	69	38	1175

† And other dates.

COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	22.3	75	-26	0.80	0.95	0.61	0.79	7.4	4	8	9	13	
1893...	22.4	74	-27	0.72	0.75	0.24	0.57	4.6	3	9	10	11	
1894...	23.1	71	-25	0.44	0.54	0.43	0.47	2.6	4	10	8	12	
1895...	20.6	76	-25	1.18	1.01	1.08	1.09	8.2	5	8	9	13	
1896...	8.1	62	-32	2.06	2.47	2.17	2.23	21.7	9	8	7	15	
1897...	20.0	86	-28	0.27	0.33	0.36	0.32	2.8	3	12	9	9	
1898...	23.0	69	-30	0.42	0.30	0.30	0.34	3.1	3	13	8	9	
1899...	36.0	68	2	0.26	0.51	0.16	0.31	1.0	2	15	8	11	
1900...	20.4	64	-29	0.28	0.29	0.40	0.32	5.2	5	14	8	9	
1901...	26.8	70	-7	0.10	0.09	0.19	0.13	1.6	1	15	8	9	
1902...	29.6	69	-12	0.25	0.11	0.36	0.24	1.9	3	11	6	13	
1903...	25.3	78	-20	0.27	0.22	0.28	0.26	2.5	3	13	4	13	
1904...	35.7	80	-10	0.10	0.09	0.07	0.09	0.7	1	18	5	17	
1905...	31.6	88	-38	1.66	1.54	0.89	1.36	11.0	9	7	13	10	
1906...	23.8	68	-16	1.90	1.34	1.23	1.49	10.2	7	10	8	13	
1907...	30.2	85	-15	0.08	0.10	0.05	0.08	0.7	1	16	8	6	
1908...	31.1	75	-15	1.10	0.91	0.80	0.94	8.2	4	12	8	10	
1909...	29.4	88	-23	0.68	0.81	0.44	0.48	4.6	3	11	9	10	
1910...	23.9	68	-23	0.34	0.44	0.43	0.40	3.2	2	8	10	12	
1911...	16.7	58	-33	0.70	0.60	0.63	0.64	7.1	6	12	8	10	
1912...	31.8	70	-1	0.09	0.06	0.06	0.07	0.5	1	14	9	7	
1913...	34.1	77	-2	0.21	0.23	0.21	0.22	1.6	2	15	8	7	
1914...	30.7	83	-30	0.45	0.31	0.23	0.33	2.6	2	13	10	7	
1915...	28.1	71	-10	0.81	0.83	1.21	0.95	3.7	4	10	10	10	
1916...	28.8	75	-18	0.10	0.25	0.46	0.27	1.7	2	16	8	6	
1917...	36.8	77	-7	0.20	0.13	0.05	0.13	1.4	1	16	6	8	
1918...	28.9	71	-18	1.31	1.09	0.49	0.96	5.3	4	13	6	11	
1919...	15.6	57	-36	1.88	0.96	0.62	1.15	11.8	5	11	8	11	
1920...	28.0	65	-14	0.55	0.33	0.14	0.34	2.1	3	10	9	11	
1921...	21.0	69	-30	0.52	0.71	0.83	0.69	6.3	5	7	8	15	
1922...	31.8	65	-8	2.97	2.26	1.50	2.24	6.3	6	7	16	9	
1923...	36.5	72	-5	0.58	0.45	0.39	0.47	0.6	3	13	8	9	
1924...	27.6	69	-15	0.19	0.17	0.17	0.18	1.9	2	11	9	10	
1925...	28.8	69	-17	0.42	0.17	0.13	0.24	1.3	2	14	8	8	
1926...	21.5	68	-23	0.72	0.54	0.60	0.62	6.2	5	6	7	17	
1927...	20.7	59	-24	0.71	0.72	0.65	0.69	7.1	6	7	8	15	
1928...	31.0	70	-11	1.08	0.28	0.09	0.48	0.2	1	15	8	7	
1929...	24.8	70	-21	0.57	0.46	0.56	0.53	5.2	5	9	8	13	
1930...	29.4	72	-21	1.56	0.62	0.43	0.87	6.2	5	13	7	10	
1931...	30.3	78	-10	0.98	0.40	0.27	0.55	5.0	3	13	7	10	
1932...	25.2	70	-17	0.70	0.38	0.45	0.51	4.6	4	10	10	10	
1933...	28.3	78	-15	0.81	0.58	0.56	0.65	6.6	5	9	8	13	
1934...	33.9	73	-1	0.51	0.22	0.10	0.28	1.0	3	13	7	10	
1935...	17.2	57	-25	0.70	0.79	0.69	0.73	8.1	6	8	8	14	
1936...	28.0	69	-28	0.37	0.33	0.31	0.34	4.0	4	13	8	9	
1937...	25.2	73	-25	0.51	0.40	0.33	0.41	3.5	4	10	7	13	
1938...	23.8	75	-21	0.63	0.94	1.04	0.87	7.9	6	8	10	12	
1939...	34.9	74	-4	0.04	0.02	0.02	0.03	T.	1	19	6	5	
1940...	22.0	59	-28	0.62	0.62	0.53	0.59	7.1	6	8	8	14	
1941...	30.5	69	-17	0.26	0.48	0.46	0.40	3.6	5	9	8	13	
1942...	28.0	73	-14	0.22	0.13	0.18	0.18	1.5	3	10	10	10	
1943...	28.7	63	-4	0.52	0.38	0.43	0.44	4.2	4	8	8	14	
1944...	27.1	70	-21	2.58	2.36	1.82	2.25	8.8	9	5	5	20	
1945...	22.3	75	-26	0.24	0.56	0.64	0.48	5.3	4	7	9	14	
1946...	25.3	68	-22	0.57	0.19	0.29	0.35	3.3	4	12	8	10	
Period	26.7	88	-38	0.71	0.59	0.50	0.60	4.6	4	11	8	11	

NAT.
HIST.

Climatological Data for November 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days			Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	24.6	.....	62	5	-15	25	0.47	.....	0.28	21	4.8	4	15	5	10	nw.	Albert Thoren.
Carrington	Foster	1,579	49	25.0	-2.3	62	1	-9	23	0.05	-0.50	0.02	21 1/2	0.8	3	17	4	9	.....	Soo Line Agent.
Casselton	Cass	934	51	28.2	+1.2	64	1	-5	25	1.50	+0.82	0.92	6-7	6.3	5	17	11	2	n.	Joseph L. Farrell.
Cavalier	Pembina	894	39	24.1	-0.6	63	5 1/2	-12	29	0.29	-0.45	0.20	28	4.2	3	5	17	8	nw.	City Light & Power Co.
Colgate	Steele	1,180	13	.....	.....	.....	.....	.....	.....	0.12	-0.55	0.06	30	1.8	3	12	12	6	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	50	25.0	-2.3	60	5	-9	22	0.19	-0.45	0.12	21	1.9	2	16	3	11	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	16	.....	.....	.....	.....	.....	.....	0.08	-0.49	0.06	29	1.3	2	20	7	3	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	71	23.8	-0.7	60	5	-9	22	0.20	-0.52	0.07	23-24	3.5	7	10	8	12	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	46	27.2	-2.1	60	4	-7	22	0.61	+0.09	0.48	7	2.3	5	6	13	11	n.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	20.6	-4.0	56	5	-18	22	0.26	-0.36	0.11	22	3.0	4	16	7	7	nw.	Mike Davis.
Ellendale	Dickey	1,457	48	28.0	-0.4	56	1	-5	25 1/2	1.33	+0.77	1.10	7	2.6	4	11	6	13	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	27.4	+0.3	63	1	-5	25 1/2	1.04	+0.14	0.60	6-7	4.9	6	12	7	11	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	28.6	0.0	60	1	-4	25	1.20	+0.63	0.88	7	4.0	4	15	10	5	sw.	Art Waterman.
Fullerton	Dickey	1,439	49	29.0	0.0	54	1 1/2	-3	22	1.83	+1.12	1.55	6-7	2.2	5	10	10	10	s.	F. O. Alin.
Gackle	Logan	1,951	16	27.4	0.0	59	1 1/2	-7	22	0.01	-0.53	0.01	26	0.1	1	11	11	8	w.	Tony Martin.
Grafton	Walsh	827	55	25.0	0.0	60	5	-11	25	0.62	-0.07	0.33	21	7.0	6	15	10	5	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	24.6	-1.2	58	5	-8	30	0.60	-0.19	0.25	20-21	4.3	6	13	4	13	nw.	University of N. Dak.
Grand Forks Airt. 2 1/2 mi. W	Grand Forks	834	6	24.5	.....	60	5	-10	24 1/2	0.57	.....	0.19	20-21	7.9	9	10	10	10	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	18	27.3	-1.6	63	1	-4	25	1.17	+0.52	0.97	7	2.7	3	8	10	12	nw.	Soo Line Agent.
Hanuah	Cavalier	1,568	53	19.4	-1.3	49	14	-13	22	0.58	-0.11	0.30	29-30	6.6	5	1	13	16	sw.	A. E. Prior.
Hillsboro	Trail	901	41	27.8	+0.5	61	5	-5	25	0.74	-0.02	0.32	6-7	6.4	6	12	12	6	sw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	27.4	+0.1	60	5	-6	22	0.05	-0.62	0.04	29	1.0	2	14	4	12	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	6	26.4	.....	60	5	-6	22	0.12	.....	0.07	29-30	1.9	4	13	7	10	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	25.9	.....	65	14	-9	22	0.05	.....	0.03	21	1.0	2	13	11	6	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	19.9	-3.8	52	14	-12	22	0.66	-0.07	0.22	21	6.3	9	14	7	9	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	54	25.6	-0.2	60	5	-9	25	0.26	-0.56	0.13	22	2.5	3	13	4	13	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	28.7	-0.1	62	1	-5	25	1.12	+0.49	0.82	7	4.5	5	14	2	14	nw.	J. O. Halverson.
Mayville	Trail	975	51	27.4	-0.4	58	1 1/2	-5	25	0.43	-0.28	0.18	6-7	3.0	5	16	5	9	nw.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	23.6	-3.0	60	5	-12	22	0.09	-0.45	0.06	29	0.9	2	14	4	12	sw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	28.3	-1.4	65	4	-10	25	0.79	+0.16	0.58	7	3.2	4	14	5	11	sw.	J. G. Carlson.
McVille	Nelson	1,467	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oakes	Dickey	1,318	18	27.6	-1.0	62	1	-4	22 1/2	1.58	+1.02	1.10	7	3.9	7	16	8	6	nw.	C. W. McMillan.
Park River	Walsh	998	43	24.0	-3.0	61	5	-12	25	0.38	-0.25	0.25	21	4.4	4	17	5	8	nw.	C. M. Hagen.
Pembina Airport, 1 mile S.	Pembina	795	73	21.4	-2.0	61	5	-18	28 1/2	0.30	-0.45	0.11	27 1/2	5.0	8	9	12	9	s.	Martin Severson.
Petersburg	Nelson	1,524	16	24.0	.....	59	1	-10	22	0.14	-0.50	0.10	21	2.1	3	13	15	2	w.	U. S. Airway Comm. Sta.
Sharon	Steele	1,516	23	24.5	-0.2	60	5	-8	22 1/2	0.27	-0.45	0.10	21	3.6	4	12	9	9	sw.	T. C. Overland.
Valley City	Barnes	1,229	42	28.4	+0.4	58	1 1/2	-5	25	0.42	-0.26	0.21	8	5.3	4	15	7	8	nw.	Hugh Lyon.
Wahpeton	Richland	962	55	29.1	+0.1	62	1	-5	25	0.94	+0.25	0.60	6-7	6.9	5	20	3	7	nw.	Miss I. C. Robertson.
Average for Eastern Division				25.7	-1.1	65	4 1/2	-18	22 1/2	0.57	-0.14	1.55	6-7	3.6	4	13	8	9	nw.	State School of Science.
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	26.8	-1.2	56	5 1/2	-6	22	0.31	-0.24	0.25	6-7	1.2	5	11	8	11	nw.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	18.6	.....	51	14	-18	22	0.21	.....	0.08	28	2.7	5	14	6	10	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	19.7	-0.7	51	14	-12	30	0.33	-0.14	0.20	26	3.9	3	15	6	9	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	28.3	-0.2	60	5	-4	22	0.14	-0.34	0.13	29-30	2.1	2	9	8	13	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	7	27.8	+1.3	59	5	-5	22	0.17	-0.40	0.11	29-30	2.3	3	9	8	13	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	20.2	-3.4	60	5	-22	22	0.22	-0.25	0.06	25	2.3	6	15	6	9	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	25.1	-1.4	52	14	-8	22	0.13	-0.47	0.08	20	1.5	2	14	4	12	sw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	28.6	-1.2	58	4 1/2	-7	22	0.20	-0.37	0.20	26	2.0	1	7	12	11	nw.	J. W. Evans.
Center	Oliver	2,100	9	25.9	.....	58	5	-10	22	0.10	.....	0.07	27-28	1.5	4	8	12	10	nw.	Fred L. Heinz.
Drake	McHenry	1,634	17	22.5	-3.4	56	5 1/2	-12	22 1/2	0.23	-0.31	0.15	30	5.5	3	15	14	1	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	51	21.0	-3.1	57	6	-17	22	0.16	-0.34	0.08	21	2.2	4	13	7	10	n.	State Tuberculosis San.
Eckman	Bottineau	1,500	41	20.3	-5.1	62	5	-18	22	0.36	-0.13	0.09	23-24	4.5	6	16	5	9	nw.	E. R. Sherman.
Fessenden	Wells	1,610	35	25.3	-1.3	62	5	-11	22	0.31	-0.29	0.11	20	4.3	6	12	12	6	n.	John V. Zuber.
Fort Yates	Sioux	1,670	47	23.7	-0.3	61	14	-3	22	0.04	-0.41	0.04	27	1.0	1	15	9	6	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	26	23.9	-1.7	60	5	-10	22	0.21	-0.47	0.07	23-24	4.3	5	6	12	12	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	25.2	-1.3	62	4	-9	22	0.23	-0.26	0.14	24	3.2	4	10	8	12	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	40	24.5	-1.9	60	4	-13	22	0.20	-0.34	0.06	16 1/2	3.2	5	19	2	9	nw.	Fred Rober.
Hansboro	Towner	1,597	39	19.6	-3.9	53	13	-15	22	0.14	-0.40	0.05	20 1/2	1.8	3	14	7	9	nw.	W. E. Dishner.
Harvey, 3 miles SE	Wells	1,596	44	.....	.....	.....	.....	.....	.....	0.04	-0.54	0.02	15 1/2	0.7	2	5	12	13	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	22.9	.....	58	5	-13	22	0.05	.....	0.05	22	1.0	1	10	14	6	w.	John Dalmage.
Linton	Emmons	1,711	30	29.4	+0.6	62	14	-3	22	0.03	-0.42	0.02	26	0.4	2	11	6	13	nw.	Wm.

Climatological Data for November 1946—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	54	27.4	-1.0	60	6	-12	22	0.02	-0.38	0.02	23-24	0.5	1	11	7	12	nw.	H. W. Case.
Epping	Williams	2,224	38	23.8	-2.5	62	5	-18	22	0.23	-0.20	0.23	24	3.0	1	13	6	11	nw.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	18							0.18	-0.27	0.13	29	2.8	2	15	4	11	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	29	27.4		57	14	-7	22	0.44	-0.04	0.21	26	5.7	7	8	7	15	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	6	27.5	-3.2	59	5	-11	22	0.24	-0.22	0.10	26	2.4	4	7	8	15	w.	U. S. Airway Comm. Sta.
Grenora	Williams	2,114	38	24.2	-1.9	64	4	-16	22	0.52	-0.03	0.22	20	6.2	3	10	16	4	nw.	L. D. Nielson.
Halliday	Dunn	2,073	5							0.27		0.20	20	4.5	2	13	11	6	nw.	John Kisse.
Hettinger	Adams	2,675	40	28.3	-3.1	58	6	-5	22	0.27	-0.13	0.23	26	3.5	2	19	3	8	nw.	Edgar Martin.
Kenmare	Ward	1,799	15	23.4	-2.9	61	5	-12	22†	0.76	+0.22	0.21	23-24	8.6	9	9	12	9	w.	Theo. E. Eckberg.
Marmarth	Slope	2,714	38	30.2	-0.7	57	6	-5	21†	0.33	-0.04	0.28	26	5.1	4	9	9	12	nw.	S. P. Grane.
Medora, 1 1/2 mi. W.	Billings	2,271	32							0.27	-0.21	0.12	21	4.7	4	15	6	9	sw.	Harry Roberts.
Mott	Hettinger	2,424	40	28.6	-0.7	63	5	-6	22	0.12	-0.34	0.10	26	1.0	2	14	7	9	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	55	28.0	-1.4	60	6†	-10	22	0.29	-0.16	0.14	29	3.5	4	8	11	11	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn		5	24.4		53	5	-10	22	0.13		0.08	26	1.3	4	13	5	12	nw.	Peter F. Fick.
Parshall	Mountrail	1,929	32	24.6	-0.9	57	5	-16	22	0.22	-0.17	0.10	24	3.0	4	7	20	3	nw.	C. E. Shubert.
Portal	Burke	1,954	33	19.6	-5.4	61	5	-21	22	0.78	+0.26	0.40	18-19	9.5	5	14	9	7	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	42	21.6	-3.8	56	5	-18	22	0.33	-0.16	0.15	24	4.9	4	11	7	12	nw.	E. J. Lewis.
Richardton, 1 1/2 miles N.	Stark	2,467	31	28.1	-0.6	58	6	-8	22	0.27	-0.25	0.16	26	3.3	6	12	7	11	nw.	Assumption Abbey.
Ryder	Ward	2,108	18							0.20	-0.33	0.10	21	2.9	4	15	3	12	nw.	S. C. Schellebaum.
Sanish	Mountrail	1,835	21	22.7	-5.3	61	5	-17	23	0.18	-0.35	0.08	20	2.4	3	7	10	13	w.	H. J. Bugge.
Stanley	Mountrail	2,258	9	20.0		59	5	-21	22	0.21		0.07	19†	3.1	4	13	7	10	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	18							0.19	-0.34	0.05	18-19†	2.1	5	15	7	8	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	18							0.25	-0.21	0.25	23-24	2.8	1	10	8	12	sw.	L. A. Simon.
Trotters	Golden Valley		21							0.69	+0.24	0.25	26	6.0	4	5	16	9	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	6	25.1		59	5	-15	22	0.21		0.14	23-24	2.8	3	12	8	10	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	34	25.6	-2.9	61	5	-13	22	0.28	-0.21	0.18	24	3.8	3	12	6	5	sw.	J. C. Zeller.
Wildrose	Williams	2,258	17							0.56	+0.06	0.32	25	5.2	4	10	11	9	sw.	Jonathan Winkjer.
Williston	Williams	1,878	68	25.8	-1.4	61	5	-11	22	0.45	-0.13	0.30	23	4.2	5	7	8	15	sw.	U. S. Weather Bureau.
Average for Western Division				25.6	-2.5	68	5	-21	22	0.29	-0.21	0.40	18-19	8.9	4	12	8	10	nw.	
Average for the State				25.3	-1.4	68	5	-22	22	0.35	-0.25	1.55	6-7	3.3	4	12	8	10	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

† Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for November 1946																																			
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum...	55	41	43	55	56	47	42	41	36	43	48	45	52	55	48	27	33	56	25	24	19	19	34	23	40	36	28	34	26	34	...	38.8		
	Minimum...	21	19	13	23	25	30	31	23	15	12	23	20	23	22	21	7	4	24	13	13	-2	-6	12	-3	2	7	5	11	16	16	...	14.7		
Bismarck Airport	Maximum...	58	41	48	57	59	52	48	40	42	41	46	47	53	53	43	25	34	49	26	18	12	20	32	23	43	39	29	37	28	33	...	39.2		
	Minimum...	23	20	14	24	26	28	31	22	20	23	19	24	21	20	24	9	6	23	13	11	-2	-5	20	5	10	10	5	15	15	18	...	16.4		
Bottineau	Maximum...	44	44	48	53	60	54	44	36	50	41	45	43	50	53	32	18	25	30	10	10	8	17	25	15	22	9	22	11	21	17	...	31.9		
	Minimum...	24	26	14	20	28	29	27	17	10	20	19	13	17	25	19	-4	-9	15	8	4	3	-22	-15	2	-9	-2	-10	-4	-12	-5	...	8.6		
Carson	Maximum...	56	40	47	58	58	54	47	40	39	40	45	46	53	55	45	33	34	50	26	20	15	23	42	32	45	40	30	40	28	34	...	40.5		
	Minimum...	25	24	14	23	30	27	28	15	21	27	19	21	25	27	23	7	7	23	16	10	-1	-7	17	7	7	17	1	16	15	17	...	16.7		
Crosby	Maximum...	50	36	49	58	59	58	42	37	39	45	38	43	51	50	31	12	28	27	9	7	1	20	22	15	29	5	31	11	24	16	...	31.4		
	Minimum...	21	23	19	19	24	25	27	17	17	20	26	16	17	20	20	-2	-6	8	8	1	-1	-20	-18	6	-3	-4	-6	-4	-3	11	...	9.3		
Devils Lake	Maximum...	59	37	44	53	60	57	41	33	40	41	42	42	49	54	39	24	24	39	22	17	12	9	25	12	30	34	24	24	22	23	...	34.3		
	Minimum...	27	23	19	26	35	30	30	20	17	20	24	21	28	25	24	-1	22	7	8	-3	-9	8	-3	0	0	0	0	0	0	0	...	13.2		
Dickinson Airport	Maximum...	50	37	44	55	57	56	42	36	37	40	38	44	50	55	38	21	33	44	21	13	8	23	46	21	45	37	40	39	35	34	...	38.0		
	Minimum...	27	18	16	28	27	28	29	22	25	24	23	25	26	22	19	7	10	19	12	7	-5	-6	19	7	16	2	0	13	16	15	...	16.4		
Dunn Center	Maximum...	45	40	43	50	55	57	45	40	40	41	45	51	51	55	45	31	30	40	23	15	11	16	37	30	40	35	33	41	30	32	...	38.2		
	Minimum...	21	26	16	27	28	29	31	20	23	24	23	26	26	19	28	7	6	20	14	8	-2	-9	14	3	5	16	6	15	13	16	...	16.6		
Fargo Airport	Maximum...	63	47	46	51	57	50	40	37	38	39	45	45	53	51	49	31	31	51	28	36	32	11	30	25	29	33	24	25	22	24	...	38.1		
	Minimum...	27	26	18	25	27	31	37	29	24	20	23	28	29	24	31	11	4	28	19	23	5	-2	9	-5	-5	6	4	4	3	3	...	16.7		
Fessenden	Maximum...	60	43	46	56	62	55	45	38	43	40	42	43	49	59	45	31	-23	42	28	17	12	11	30	24	25	37	28	32	24	26	...	37.2		
	Minimum...	29	29	16	26	32	28	29	22	15	18	21	21	27	24	25	2	3	17	9	7	-2	-11	2	-1	-4	6	0	3	2	9	...	13.4		
Fullerton	Maximum...	54	47	45	52	54	46	41	40	35	39	45	44	54	50	50	34	31	49	42	27	27	15	35	32	37	35	28	38	29	32	...	39.6		
	Minimum...	24	26	17	27	27	36	28	22	18	25	26	26	23	23	11	6	23	21	15	7	-3	9	10	-1	21	9	21	14	20	...	18.5			
Garrison	Maximum...	49	37	43	52	57	57	45	38	41	39	42	44	52	54	36	25	23	38	22	12	9	17	32	17	34	35	28	29	27	27	...	35.7		
	Minimum...	24	21	26	26	30	30	31	20	19	24	22	21	23	24	25	6	2	20	10	8	-5	-9	17	4	7	3	1	6	6	12	...	14.8		
Golva	Maximum...	48	35	45	52	59	56	40	38	34	43	38	45	52	58	39	25	39	42	23	15	5	28	47	23	45	37	42	40	40	35	...	38.9		
	Minimum...	21	17	16	22	25	26	30	22	17	23	28	25	21	20	18	7	10	14	10	4	-7	-11	18	9	22	7	16	14	20	19	...	16.1		
Grafton	Maximum...	55	41	47	52	60	59	48	40	42	44	49	50	54	51	46	37	21	43	32	21	22	16	24	24	23	21	17	19	15	18	...	36.7		
	Minimum...	24	28	16	28	30	29	35	29	13	15	10	21	29	22	25	12	1	20	12	7	0	-3	-11	8	1	3	-10	2	2	...	13.4			
Grand Forks Airport	Maximum...	57	46	46	51	60	54	41	36	41	43	48	44	53	53	47	26	30	46	25	29	28	10	26	18	23	30	20	21	21	...	36.4			
	Minimum...	24	21	26	23	27	28	35	21	17	16	26	22	25	24	26	9	2	23	14	16	3	-6	5	-10	-6	3	-2	-6	-7	-10	...	12.6		
Jamestown Airport	Maximum...	59	44	46	57	60	47	45	39	42	45	48	45	53	52	48	28	25	52	27	24	13	15	30	20	34	37	30	34	24	28	...	38.4		
	Minimum...	22	20	15	26	27	28	33	24	17	12	27	22	23	18	22	8	1	24	12	13	-1	-6	15	-5	1	7	7	8	6	3	...	14.3		
Kenmare	Maximum...	57	40	50	58	61	58	48	40	40	48	45	45	60	57	33	13	28	28	10	9	5	22	27	12	32	10	32	12	20	19	...	34.0		
	Minimum...	29	27	20	27	30	32	29	19	19	24	27	20	28	25	4	-3	5	8	3	2	-12	-12	5	1	2	-2	2	-2	2	9	...	12.8		
Langdon	Maximum...	45	44	37	41	45	47	44	35	37	39	38	36	48	52	44	30	19	35	25	12	11	7	19	14	10	13	16	18	19	...	30.0			
	Minimum...	18	21	9	17	28	29	28	23	14	18	23	18	26	26	27	5	-4	-3	7	5	4	-12	-2	-5	-10	-1	-8	4	-10	-1	...	9.9		
Marmarth	Maximum...	56	42	45	55	55	57	45	38	45	43	42	45	52	56	42	32	38	38	24	22	15	31	49	35	44	40	40	38	35	...	41.3			
	Minimum...	22	25	14	22	24	26	33	24	20	24	24	22	19	22	20	10	12	23	14	15	-5	-5	25	12	20	33	7	20	22	25	...	19.0		
Minot Airport	Maximum...	51	42	49	55	58	56	46	34	39	40	43	45	54	54	37	16	21	31	19	10	-6	14	30	12	34	33	29	32	26	25	...	34.7		
	Minimum...	31	19	19	28	35	34	31	20	19	28	27	23	28	26	16	2	-2	19	7	6	-7	-10	12	3	9	0	2	4	2	4	...	14.5		
Mott	Maximum...	53	40	45	56	63	54	55	40	39	42	40	47	52	53	47	37	36	40	30	21	16	27	50	40	47	42	0	15	20	12	...	41.5		
	Minimum...	23	28	10	22	25	24	30	18	22	20	16	20	18	15	20	6	6	20	15	10	0	-6	26	7	9	22	0	15	20	12	...	15.6		
Pembina Airport	Maximum...	53	41	44	49	61	58	40	36	40	43	47	40	50	53	39	23	25	35	23	20	18	12	20	15	22	18	16	16	17	...	33.0			
	Minimum...	25	27	18	29	27	30	32	16	13	17	16	21	25	22	23	6	1	22	9	11	4	-7	-3	-15	-5	-7	-1	-18	-18	-12	...	9.9		
Sharon	Maximum...	59	44	45	57	60	54	42	37	42	47	46	42	58	53	48	32	21	50	30	21	21	8	23	21	23	25	21	17	18	16	...	35.9		
	Minimum...	26	25	15	25	27	32	36	24	15	15	23	17	17	21	7	-2	21	10	19	7	-8	-2	-1	-8	6	-1	-6	-2	6	...	13.1			
Steele	Maximum...	58	42	46	57	57	51	42	38	41	44	48	45	50	61	43	32	29	51	29	19	17	33	30	29	38	28	33	26	30	...	38.7			
	Minimum...	25	28	12	21	26	26	25	21	15	12	18	20	20	22	24	7	1	20	16	10	4	-9	7	7	0	12	4	11	10	16	...	14.4		
Valley City	Maximum...	58	58	45	52	56	48	46	42	38	40	49	45	53	52	49	46	23	52	45	25	24	26	28	28	33	36	27	33	27	27	...	40.4		
	Minimum...	24	25	15	26	28	29	37	25	18	13	27	23	27	18	21	10	2	21	16	12	8	-5	5	10	-3	15	3	19	5	18	...	16.5		
Wahpeton	Maximum...	62	56	47	52	57	50	44	39	37	41	45	45	52	51	51	44	27	51	42	39	38	14	32	31	32	33	29	29	23	23	...	40.5		
	Minimum...	27	27	17	24	19	32	37	28	23	23	21	25	28	26	33	15	4	5	23	22	9	-3	5	7	-5	14	6	16	6	16				

Daily Precipitation for November 1946

[illegible]

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis. 8-17-47-1050]

1.05
NT
512

Lat Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

APR 10 1947

F. J. BAVENDICK

28

VOL. LV BISMARCK, N. D., DECEMBER 1946 No. 12

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The temperature averaged near the December normal. There was a cold period from the 12th to the 18th and another cold period from the 27th to the 31st. December 29th was the coldest day in 1946 with the lowest reading -35° at Parshall. Precipitation and snowfall were nearly normal in the east and middle divisions but above normal in the west. Blizzard conditions prevailed throughout the day on the 16th with blowing and drifting snow continuing until noon of the 17th. The winds generally over the state reached 30 miles per hour with gusts to 40 miles per hour. Visibility was poor and cars had difficulty in getting through the city streets, and driving on highways was hazardous. Snow formed drifts one to two feet deep in many places. Schools in some eastern areas were closed during the storm. Streets, walks and highways continued slippery to the close of the month. Ice on the Missouri and Red rivers was thick enough so the ice harvest began during the last week. There was only 33% of possible sunshine which is 13% below the December normal. In Williston there was not a clear sunrise or sunset observed, with the result that only 12% instead of the normal 50% of sunshine was recorded. Because of the relatively open winter, livestock are in very good condition.—M.S.C.

TEMPERATURE

The mean temperature for the state was 13.3° , or 0.1° below the 1892-1946 average for December. The mean temperature for the eastern division was 10.8° ; for the middle division, 13.0° ; and for the western division, 16.2° . The highest mean temperature was 21.8° at Bowman, and the lowest, 5.1° at Pembina, making a range in mean temperature of 16.7° . The absolute range was 94° , from 55° at Medora on the 3d and Mott on the 5th, to -35° at Parshall on the 29th. The average daily excess in temperature for the state since January 1, 1946, is 1.1° .

PRECIPITATION

The average precipitation for the state was 0.58 inch, or 0.11 inch more than the 1892-1946 average for December. In the eastern division the average amount was 0.54 inch; in the middle division, 0.43 inch; and in the western division, 0.77 inch. The greatest monthly amount reported was 1.67 inches at Trotters; the least, 0.10 inch at Belcourt. The greatest amount recorded in any 24 consecutive hours was 0.68 inch at Jamestown on the 16th. The accumulated deficiency in precipitation for the state since January 1, 1946, is 0.44 inch. The average snowfall was 6.2 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.76	1	29.25	11	10.5	36	nw.	16	85	87	71	82	52	1505
Devils Lake...	30.84	1	29.15	11	9.5	34	nw.	22	72	70	74	33	1672	
Fargo.....	30.88	1	29.22	11	13.0	41	n.	16	89	88	86	87	35	1633
Williston.....	30.69	1	29.21	11	7.1	25	nw.	11	85	86	82	84	12	1522

† And other dates.

COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	7.1	60	-39	0.44	0.49	0.78	0.57	7.7	4	13	8	10	
1893...	4.7	55	-36	0.71	0.83	1.02	0.85	8.4	6	11	9	11	
1894...	19.1	70	-32	0.38	0.17	0.32	0.29	1.6	2	18	9	6	
1895...	13.8	62	-32	0.24	0.29	0.39	0.31	2.6	3	12	9	10	
1896...	16.4	53	-35	0.50	0.46	0.13	0.36	2.6	3	13	9	9	
1897...	10.8	69	-35	0.24	0.21	0.21	0.22	2.2	3	12	8	11	
1898...	12.1	51	-38	0.24	0.24	0.24	0.24	2.1	3	14	8	8	
1899...	12.8	60	-26	0.31	0.31	0.34	0.32	3.3	3	13	7	11	
1900...	17.3	53	-29	0.35	0.29	0.29	0.31	3.0	4	13	8	10	
1901...	12.4	61	-43	0.72	0.74	0.75	0.74	7.2	5	10	7	14	
1902...	7.8	49	-35	0.50	0.30	0.72	0.51	4.2	4	14	10	10	
1903...	11.6	57	-33	0.63	0.74	0.93	0.77	7.2	6	11	13	13	
1904...	14.2	55	-43	0.60	0.62	0.73	0.65	6.2	5	7	8	16	
1905...	15.3	55	-34	0.21	0.16	0.12	0.16	1.6	4	16	2	13	
1906...	8.4	48	-40	1.09	0.91	1.27	1.09	10.7	6	11	13	13	
1907...	20.1	68	-26	0.36	0.23	0.31	0.30	3.1	3	15	9	9	
1908...	14.4	62	-37	0.53	0.26	0.28	0.36	3.7	3	13	10	8	
1909...	5.2	54	-42	1.88	1.10	0.86	1.28	12.1	7	9	8	14	
1910...	12.9	56	-34	0.45	0.42	0.42	0.43	4.6	4	12	8	11	
1911...	14.9	61	-33	0.45	0.26	0.34	0.35	4.5	4	10	8	13	
1912...	18.9	72	-28	0.62	0.55	0.13	0.43	4.0	4	14	8	9	
1913...	22.7	61	-21	0.05	0.12	0.01	0.06	0.3	1	18	6	7	
1914...	5.4	57	-42	0.58	0.40	0.42	0.47	5.7	4	12	9	10	
1915...	15.8	57	-27	0.56	0.56	0.44	0.52	5.4	5	11	9	11	
1916...	2.7	61	-50	1.39	1.34	0.81	1.18	13.9	5	15	8	8	
1917...	0.7	58	-44	0.51	0.64	0.61	0.59	7.4	6	9	9	13	
1918...	18.5	65	-41	0.97	0.92	0.76	0.88	9.9	5	9	8	14	
1919...	7.4	49	-38	0.65	0.48	0.28	0.47	4.8	3	14	9	8	
1920...	15.2	59	-32	0.48	0.33	0.16	0.32	3.2	3	11	9	11	
1921...	16.5	59	-33	0.52	0.33	0.38	0.41	3.9	4	14	7	10	
1922...	8.5	55	-34	0.75	0.76	0.53	0.68	7.4	5	11	8	12	
1923...	22.2	62	-36	0.38	0.35	0.23	0.32	3.6	3	16	8	7	
1924...	2.9	58	-46	0.40	0.39	0.54	0.44	5.3	4	12	7	12	
1925...	16.5	67	-38	0.24	0.30	0.30	0.28	2.6	3	12	8	11	
1926...	9.2	55	-36	0.60	0.50	0.59	0.56	5.5	3	14	8	9	
1927...	1.8	43	-38	0.96	0.52	0.91	0.80	8.7	5	14	7	10	
1928...	20.7	57	-30	0.47	0.23	0.27	0.32	3.2	3	14	7	10	
1929...	12.5	59	-38	0.68	0.88	0.88	0.81	9.9	5	12	8	11	
1930...	19.9	53	-30	0.21	0.16	0.21	0.19	2.0	3	12	8	11	
1931...	21.0	58	-21	0.25	0.15	0.29	0.23	2.7	2	13	8	10	
1932...	12.4	60	-31	0.17	0.14	0.28	0.20	1.7	3	14	10	7	
1933...	8.6	62	-38	1.09	0.79	0.83	0.90	9.7	6	9	8	14	
1934...	12.6	53	-44	0.40	0.22	0.29	0.30	3.9	5	9	8	14	
1935...	12.6	51	-34	0.65	0.52	0.34	0.50	5.6	5	10	7	14	
1936...	15.0	59	-36	0.50	0.32	0.46	0.43	5.5	4	11	8	12	
1937...	11.4	51	-33	0.62	0.51	0.49	0.54	6.5	6	10	9	12	
1938...	18.2	55	-41	0.40	0.30	0.26	0.32	4.1	4	11	10	10	
1939...	26.7	70	-20	0.27	0.30	0.27	0.28	2.3	4	10	10	11	
1940...	19.8	59	-36	0.79	0.28	0.19	0.42	4.0	4	10	7	14	
1941...	22.5	66	-20	0.15	0.17	0.14	0.15	1.8	3	10	11	10	
1942...	10.9	53	-30	0.67	0.52	0.39	0.53	7.1	7	7	8	16	
1943...	21.5	65	-22	0.15	0.12	0.10	0.12	1.0	2	16	9	6	
1944...	15.8	50	-27	0.08	0.05	0.04	0.06	0.9	1	13	10	8	
1945...	7.0	56	-38	0.83	0.64	0.46	0.64	8.8	6	8	8	15	
1946...	13.3	55	-35	0.54	0.43	0.77	0.58	6.2	6	7	10	14	
Period	13.4	72	-50	0.53	0.44	0.45	0.47	5.0	4	12	8	11	

NAT.
HIST.

Climatological Data for December 1946

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	3	10.4	.....	42	11	-31	31	0.32	.....	0.18	16	4.5	5	13	4	14	nw.	Albert Thoren.
Carrington	Foster	1,579	49	12.5	-0.1	44	5	-28	29	0.47	+0.06	0.40	16	8.8	4	8	2	21	.....	Soo Line Agent.
Casselton	Cass	934	51	13.3	+0.5	40	11	-23	31	0.84	+0.32	0.51	16	10.0	3	14	15	2	nw.	Joseph L. Farrell.
Cavalier	Pembina	894	39	6.8	-3.7	45	11	-27	31	0.32	-0.37	0.32	16	4.0	1	1	12	18	nw.	City Light & Power Co.
Colgate	Steele	1,180	13	.....	.....	42	11	-25	29	0.78	+0.25	0.32	16	8.0	3	7	14	10	s.	O. M. Jensen.
Cooperstown	Griggs	1,423	50	11.8	-1.2	42	11	-25	29	0.65	+0.07	0.60	16	8.8	2	8	3	20	nw.	R. J. Lockner.
Courtenay	Stutsman	1,628	16	.....	.....	42	11	-25	29	0.88	+0.21	0.61	16	10.0	4	9	9	13	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	71	11.1	+1.6	42	11	-24	29	0.21	-0.33	0.12	15-16	3.5	7	4	6	21	nw.	U. S. Weather Bureau.
Edgely, 2 miles S.	LaMoure	1,568	46	15.1	+0.1	47	6	-23	30	0.34	-0.15	0.16	16	4.4	6	6	14	11	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	23	6.5	-4.0	39	11	-31	31	0.17	-0.37	0.10	16	2.5	3	7	6	18	nw.	Mike Davis.
Ellendale	Dickey	1,457	45	15.6	-0.7	46	4	-21	31	0.56	+0.10	0.24	8	3.9	4	6	10	15	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	66	12.2	+0.7	38	11	-23	30	0.66	-0.06	0.41	15-16	7.1	6	6	4	21	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	55	16.0	+0.7	40	4	-20	31	0.50	-0.06	0.27	16	5.1	4	3	12	16	sw.	Art Waterman.
Fullerton	Dickey	1,439	49	17.0	+1.8	46	11	-19	29	0.69	-0.08	0.32	16	6.1	6	1	15	15	nw.	F. O. Ahlin.
Gackle	Logan	1,951	16	15.0	+0.5	45	5	-23	29	0.17	-0.28	0.08	15	2.6	4	7	13	11	se.	Tony Martin.
Grafton	Walsh	827	55	10.4	-0.3	41	11	-26	31	0.61	+0.08	0.33	28	8.4	3	9	8	14	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	56	9.1	-1.9	38	11	-24	30	0.45	-0.17	0.29	15-16	4.8	4	7	8	16	se.	University of N. Dak.
Grand Forks Airt., 2 mi. W	Grand Forks	834	6	9.0	.....	39	11	-24	30	0.54	.....	0.30	16	5.2	11	6	4	21	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,063	18	14.9	-2.8	43	11	-20	31	0.80	+0.28	0.25	16	10.1	3	14	4	13	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	53	5.6	-2.0	38	11	-30	29	0.12	-0.47	0.12	26-27	1.5	1	5	20	6	nw.	A. E. Prior.
Hillsboro	Trails	901	41	12.4	+4.4	43	11	-25	31	0.63	-0.01	0.47	16	8.5	3	5	15	11	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	55	14.2	+0.3	45	11	-22	29	0.86	+0.21	0.68	16	11.6	3	13	9	9	nw.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,491	6	13.3	.....	46	11	-23	29	0.74	.....	0.55	16	11.4	5	5	8	18	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	6	13.6	.....	47	11	-27	29	0.77	.....	0.67	15-16	8.2	4	6	9	16	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	51	7.8	-1.0	37	11	-30	29	0.41	-0.22	0.19	28	3.6	6	12	9	10	nw.	F. Sturkugson.
Larimore	Grand Forks	1,134	54	11.2	-0.3	42	11	-25	29	0.27	-0.29	0.22	15	4.7	2	9	8	14	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	43	15.2	-0.4	40	11	-20	29	0.75	+0.24	0.25	16	7.5	6	9	1	21	nw.	J. O. Halverson.
Mayville	Trails	975	51	11.4	-1.9	43	11	-24	30	0.73	+0.21	0.61	15-16	8.2	4	7	10	14	nw.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	24	10.1	-0.7	42	11	-27	29	0.49	0.00	0.34	15-16	4.5	4	6	6	19	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	35	12.5	-2.6	40	6	-20	29	0.75	+0.29	0.39	15-16	7.0	3	13	7	11	sw.	J. G. Carlson.
McVille	Nelson	1,467	5	.....	.....	47	11	-27	29	0.77	.....	0.67	15-16	8.2	4	6	9	16	nw.	C. W. McMillan.
Oakes	Dickey	1,318	18	14.9	-1.3	47	4	-22	31	0.47	-0.03	0.14	8	4.1	7	11	9	11	nw.	C. M. Hagen.
Park River	Walsh	998	43	9.6	-1.5	40	11	-26	31	0.11	-0.40	0.05	28	2.0	3	9	6	16	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	73	5.1	-1.9	40	11	-30	31	0.29	-0.33	0.11	8	6.4	7	6	7	18	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	16	8.8	.....	40	11	-26	31	0.12	-0.36	0.06	28	1.9	3	9	14	8	nw.	T. C. Overland.
Sharon	Steele	1,516	23	10.2	-2.0	40	11	-25	29	0.91	+0.43	0.64	15-16	11.8	4	7	4	20	nw.	Hugh Lyon.
Valley City	Barnes	1,229	42	14.7	+0.2	45	11	-21	29	0.80	+0.22	0.63	16	12.1	5	5	6	20	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	55	14.8	-1.0	41	4	-21	31	0.75	+0.25	0.24	16	7.5	6	8	12	11	nw.	State School of Science.
Average for Eastern Division				10.8	-1.8	47	6	-31	31	0.54	+0.01	0.68	16	6.5	6	7	9	15	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	51	15.5	+0.7	49	6	-27	29	0.20	-0.30	0.09	16	2.6	4	1	15	15	nw.	U. S. Airway Comm. Sta.
Belcourt	Rolette	1,960	2	6.3	.....	38	7	-30	29	0.10	.....	0.04	28	2.3	4	10	11	10	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	44	9.8	+0.1	39	11	-27	29	0.61	+0.18	0.31	17	7.2	3	9	5	17	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	72	17.4	+1.7	50	6	-26	29	0.54	+0.06	0.35	16	9.6	7	3	7	21	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	7	16.4	+3.6	51	6	-27	29	0.53	-0.04	0.26	15-16	8.2	12	3	7	21	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	55	7.4	-0.9	40	6	-34	29	0.18	-0.29	0.10	28	2.5	2	9	2	20	se.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	22	15.2	+0.4	44	6	-26	29	0.55	+0.06	0.21	16	4.8	3	6	7	18	sw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	35	19.4	+2.8	52	6	-28	29	0.46	-0.02	0.20	15	5.9	6	5	12	14	nw.	J. W. Evans.
Center	Oliver	2,100	9	14.8	.....	47	6	-34	29	0.85	.....	0.50	15-16	10.7	5	11	11	9	nw.	Fred L. Heinz.
Drake	McHenry	1,634	17	11.2	-4.2	42	6	-30	29	0.40	-0.01	0.22	16	5.2	4	14	15	2	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	51	9.5	-0.8	47	10	-33	29	0.17	-0.26	0.09	26	2.2	2	5	12	14	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	41	8.4	-1.9	40	10	-34	29	0.43	-0.04	0.12	15	4.8	8	7	9	15	nw.	E. R. Sherman.
Fessenden	Wells	1,610	35	12.2	+0.4	44	10	-28	29	0.91	+0.35	0.51	16	12.4	4	13	9	9	n.	John V. Zuber.
Fort Yates	Sioux	1,670	47	20.0	+0.8	53	6	-23	29	0.15	-0.23	0.08	15	2.0	2	15	8	8	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	26	12.8	-1.4	50	11	-30	29	0.28	-0.23	0.11	7-8	4.6	5	6	9	16	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	70	14.4	0.0	44	4	-27	29	0.72	+0.24	0.34	15-16	7.8	8	5	8	18	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	40	12.1	-0.9	43	10	-29	29	0.33	-0.13	0.12	16	5.1	4	16	10	5	nw.	Fred Roble.
Hansboro	Towner	1,597	39	7.4	-1.8	39	11	-30	31	0.24	-0.30	0.24	15-16	3.0	1	7	13	11	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	44	.....	.....	47	10	-34	29	0.24	-0.29	0.15	15	2.6	5	14	9	8	nw.	H. J. Reynolds.
Leeds	Benson	1,515	6	6.5	.....	40	11	-28	29	0.45	.....	0.33	16	5.0	3	2	15	14	w.	John Dulmage.
Linton	Emmons	1,711	30	18.8	+3.5	50	6	-25	29	0.32	-0.07	0.24	16	4.3	6	6	9	16	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	32	11.6	+0.2	45	6	-30	29	0.30	-0.13	0.12	16							

Climatological Data for December 1946-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Elbowoods	McLean	2,082	54	16.8	+0.9	47	6	-30	29	0.71	+0.31	0.21	16	8.5	5	16	9	6	nw.	H. W. Case.	
Epping	Williams	2,224	38	13.5	-1.7	42	11	-30	29	0.30	-0.15	0.20	19	3.5	2	15	7	9	se.	T. Beachler.	
Fairfield, 9 1/2 miles N	Billings	2,650	18							0.90	+0.44	0.34	7	3.5	6	13	10	8	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N	Billings	2,790	29	19.5		51	5	-23	29	1.45	+0.97	0.49	7	9.0	9	3	15	13	nw.	Verne King.	
Golva, 1 mile E	Golden Valley	2,781	6	20.4	+2.0	53	4	-28	29	0.88	+0.41	0.30	7	8.9	11	5	8	19	w.	U. S. Airway Comm. Sta.	
Grenora	Williams	2,114	38	13.2	+0.9	42	11	-26	29	0.16	-0.49	0.10	7-8	1.2	3	11	16	4	w.	L. D. Nielson.	
Halliday	Dunn	2,073	5							0.77		0.34	15	7.3	5	2	14	15	nw.	John Kisse.	
Hettinger	Adams	2,675	40	20.8	+2.5	54	5	-27	29	0.63	+0.26	0.43	7	2.3	6	17	6	8	nw.	Edgar Martin.	
Kenmare	Ward	1,799	15	12.6	+1.6	48	6	-27	29	0.64	+0.21	0.16	7	6.5	10	10	6	15	w.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	38	20.6	+2.1	49	5	-28	29	0.97	+0.57	0.33	7	12.0	9	5	11	15	nw.	S. P. Grane.	
Medora, 1 1/2 mi. W	Billings	2,271	32	21.7		55	3	-28	29	1.63	+1.15	0.42	15-16	13.0	6	15	9	7	sw.	Harry Roberts.	
Mott	Hettinger	2,424	40	19.9	+4.1	55	5	-27	29	0.77	+0.29	0.35	7	4.3	6	13	4	14	nw.	Northern Pacific Agent.	
New England	Hettinger	2,621	55	21.4	+4.0	52	5	-28	29	1.29	+0.89	0.40	15-16	11.4	8	5	12	14	nw.	Alfred Hasel.	
New Hradec, 1 mile E	Dunn		5	15.2		43	5	-30	29	1.10		0.43	16	7.1	10	9	12	10	sw.	Peter F. Fieck.	
Parshall	Mountrail	1,929	32	13.0	-1.5	43	10	-35	29	0.62	+0.21	0.17	7-8	5.6	9	10	16	5	nw.	C. E. Shubert.	
Portal	Burke	1,954	33	8.7	-3.9	42	5	-32	29	0.41	-0.04	0.16	6-7	6.1	3	8	11	12	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	42	12.2	-3.6	39	7	-33	29	0.38	-0.16	0.15	28	5.0	4	8	12	11	nw.	E. J. Lewis.	
Richardton, 1 1/2 miles N	Stark	2,467	31	18.9	+2.7	50	5	-26	29	1.38	+0.96	0.60	15-16	11.4	9	12	7	12	sw.	Assumption Abbey.	
Ryder	Ward	2,108	18							0.55	+0.09	0.20	15	4.9	8	8	6	17	nw.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	21	12.8	-0.7	45	6	-32	29	0.61	+0.16	0.22	7	3.7	6	1	19	11	nw.	H. J. Bugge.	
Stanley	Mountrail	2,258	9	9.2		41	11	-34	29	0.78		0.26	7	11.2	6	9	10	12	nw.	Leroy Edwards.	
Tagus	Mountrail	2,179	18							0.47	-0.05	0.22	7	2.7	10	11	9	12	sw.	Geo. N. Pilgard.	
Tioga	Williams	2,279	18							0.40	-0.04	0.20	15	5.3	2	8	11	12	sw.	L. A. Simon.	
Trotters	Golden Valley		21							1.67	+1.27	0.50	16	12.9	7	1	19	11	sw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	6	14.6		47	4	-33	29	0.53		0.19	7	3.6	8	9	11	11	nw.	H. Glenn Sims.	
Watford City	McKenzie	2,084	34	16.2	+0.9	47	3	-27	29	0.89	+0.36	0.28	7-8	6.6	8	8	20	3	w.	J. C. Zeller.	
Wildrose	Williams	2,258	17							0.39	-0.13	0.16	20	5.4	3	5	15	11	nw.	Jonathan Winkjer.	
Williston	Williams	1,878	68	15.8	+2.0	43	11	-25	29	0.59	+0.01	0.27	14-15	4.9	8	0	7	24	sw.	U. S. Weather Bureau.	
Average for Western Division				16.2	+0.3	55	3	-35	29	0.77	+0.32	0.60	15-16	6.7	7	8	11	12	nw.		
Average for the State				13.3	-0.1	55	3	-35	29	0.58	+0.11	0.68	16	6.2	6	7	10	14	nw.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for December 1946

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum...	18	36	38	43	42	49	42	34	33	38	43	12	7	14	18	18	8	16	28	35	29	39	33	29	33	24	23	-2	-3	-6	17	25.1	
	Minimum...	9	11	16	20	21	25	20	30	37	11	20	10	0	-7	7	-2	-4	-13	12	23	10	14	6	10	2	0	-2	-4	-27	-16	-26	5.9	
Bismarck Airport	Maximum...	22	42	42	44	43	51	39	39	37	32	48	45	15	6	17	16	10	13	31	34	27	42	24	33	37	20	16	-1	-3	-1	17	26.3	
	Minimum...	13	22	14	17	21	24	19	31	15	13	12	-1	-5	6	11	-1	-2	-15	21	27	7	14	3	6	8	6	-2	-19	-27	-15	-9	6.6	
Bottineau	Maximum...	20	30	30	35	38	40	39	34	21	37	38	2	9	10	5	4	14	25	30	26	34	18	26	30	5	0	-3	-5	-5	10	13	19.0	
	Minimum...	-14	-4	0	7	12	15	9	12	8	-3	15	-15	-21	-21	-5	0	-12	-19	-18	11	10	16	-6	-2	-1	-4	-5	-12	-34	-25	-25	-4.2	
Carson	Maximum...	20	44	44	47	50	52	40	38	35	46	43	24	7	15	18	5	25	32	35	32	40	32	37	40	30	25	-1	-1	1	1	14	28.6	
	Minimum...	14	18	20	27	29	29	26	22	22	23	22	5	-3	5	5	-3	-4	-4	10	24	17	17	12	12	22	12	-3	-14	-28	-14	-7	10.1	
Crosby	Maximum...	23	32	37	36	38	42	38	34	26	41	38	-6	-3	6	4	0	4	20	32	34	34	32	22	32	26	10	14	-8	-1	4	20	21.3	
	Minimum...	-3	5	3	3	14	17	16	16	5	0	23	-12	-20	-20	-4	-2	-8	-10	0	6	10	8	-1	-1	6	2	-10	-27	-17	-18	-0.7		
Devils Lake	Maximum...	12	33	20	36	31	40	36	35	34	32	42	5	1	7	11	7	3	11	26	32	26	40	23	23	24	6	7	-4	-4	-2	19	19.6	
	Minimum...	-11	10	11	17	18	27	19	30	13	8	5	-8	-12	-5	2	-2	-6	-10	6	17	20	10	4	8	-3	-3	-4	-18	-24	-20	-18	2.6	
Dickinson Airport	Maximum...	22	44	46	45	51	47	35	35	33	45	43	14	7	15	20	18	6	19	32	33	29	39	31	33	37	26	25	-5	1	2	27.4		
	Minimum...	15	19	24	31	30	30	25	30	22	24	13	2	-1	7	12	-3	-1	0	12	22	11	11	6	16	14	13	-6	-22	-22	-14	-4	10.2	
Dunn Center	Maximum...	4	29	24	35	30	36	35	35	37	35	38	14	8	11	17	17	6	9	27	27	28	35	21	20	29	12	17	3	-11	-1	6	20.4	
	Minimum...	-14	2	12	17	20	25	18	32	20	17	14	0	-4	2	6	-2	-7	-10	5	20	16	16	6	5	-4	-6	-2	-14	-20	-23	-23	4.1	
Fessenden	Maximum...	18	37	31	39	41	41	38	36	36	44	42	18	2	10	11	11	6	14	27	32	24	34	27	24	29	6	9	-1	-3	-2	13	22.4	
	Minimum...	-9	10	9	17	18	23	20	12	17	19	16	-6	-11	-3	3	-2	-6	-14	2	11	7	7	1	6	2	-4	-4	-14	-28	-18	-21	1.9	
Fullerton	Maximum...	20	34	30	45	38	40	40	35	37	37	46	39	8	13	15	18	5	18	31	36	32	39	39	26	35	17	18	3	-3	-2	15	25.9	
	Minimum...	-6	5	15	13	18	22	24	32	28	18	26	4	-3	7	4	5	-3	-7	7	21	22	17	9	9	14	0	3	-19	-12	-18	8.1		
Garrison	Maximum...	19	40	38	44	42	43	37	37	31	44	41	8	3	12	13	13	9	15	28	33	28	40	20	32	32	11	9	-3	-4	-3	12	23.4	
	Minimum...	-1	19	11	24	20	22	19	30	20	18	8	-5	-9	3	5	0	-4	-12	13	25	12	12	2	8	4	-2	-3	-21	-27	-15	-10	5.5	
Golva	Maximum...	28	49	50	53	51	51	38	46	45	13	14	29	18	6	21	34	29	40	31	35	40	36	34	4	2	6	25	30	6	25	30.6		
	Minimum...	11	17	22	29	24	21	23	31	23	26	12	3	2	7	14	-5	-3	1	14	27	7	14	9	23	14	11	-6	-14	-28	-13	-6	10.1	
Grafton	Maximum...	4	28	29	34	25	34	34	36	27	41	27	3	9	7	7	5	10	24	31	32	30	36	22	20	11	6	2	-9	-3	1	19.3		
	Minimum...	-15	-4	13	17	21	21	11	20	23	3	18	-6	-8	-8	-5	0	-11	-9	9	10	20	19	5	1	-5	-8	0	-10	-22	-13	-26	1.4	
Grand Forks Airport	Maximum...	5	28	22	32	25	33	30	34	35	30	39	8	5	9	12	13	5	9	24	29	29	35	20	18	23	8	10	1	-8	-2	6	18.3	
	Minimum...	-17	-3	11	19	19	21	11	29	16	8	7	-5	-8	-7	-3	-4	-15	-10	-10	12	13	12	4	-5	-8	-10	0	-16	-22	-24	-24	-0.3	
Jamestown Airport	Maximum...	15	35	23	42	40	43	38	35	35	41	46	10	5	13	15	15	6	13	25	34	27	38	20	25	31	10	12	-3	-5	-2	15	22.5	
	Minimum...	-7	13	13	13	19	25	20	31	17	12	10	-3	-8	5	5	-1	-7	-11	10	22	19	12	4	7	0	-3	-3	-1	-23	-23	-23	4.1	
Kenmare	Maximum...	25	37	36	39	44	48	39	40	28	42	40	-1	0	5	7	4	6	22	32	34	39	38	24	32	19	8	-1	-3	-2	2	20	22.8	
	Minimum...	-3	10	7	10	16	25	21	21	11	9	26	-11	-16	-16	-2	-1	-5	-4	-1	14	12	10	3	3	10	1	-6	-8	-27	-17	-18	2.5	
Langdon	Maximum...	5	31	21	31	24	36	35	35	33	33	29	37	27	-1	10	7	3	4	9	24	30	34	25	17	3	2	2	-6	-13	-4	-15	-30	2.0
	Minimum...	-20	-3	8	15	16	19	14	24	16	0	18	-12	-16	-13	-9	-3	-15	-15	-4	6	15	17	3	2	6	-13	-4	-15	-30	-21	-25	2.0	
Marmarth	Maximum...	30	48	48	45	49	44	40	38	36	45	44	19	16	20	30	25	8	25	34	36	34	42	35	36	39	36	30	0	-2	6	25	31.1	
	Minimum...	14	15	20	20	24	25	24	31	26	27	19	11	7	9	14	-4	-5	-12	11	29	4	17	6	21	15	9	0	-15	-28	-13	-6	10.2	
Minot Airport	Maximum...	20	36	35	41	38	40	37	36	33	39	41	1	-1	6	9	7	6	20	28	33	26	38	21	30	30	7	7	-5	-1	-5	14	21.5	
	Minimum...	-5	16	6	22	18	28	22	30	12	12	0	-10	-12	-2	1	-2	-6	-9	14	23	17	9	2	9	3	1	-5	-22	-28	-16	-15	3.6	
Mott	Maximum...	23	45	50	47	55	48	41	40	40	45	41	26	15	18	21	22	10	24	32	35	34	42	35	40	42	33	28	4	-2	2	18	30.9	
	Minimum...	10	15	20	25	26	24	20	22	20	22	20	8	0	5	10	2	-2	-6	10	22	10	13	-4	11	20	18	0	-16	-27	-11	-10	8.9	
Pembina Airport	Maximum...	-1	26	23	23	24	32	28	35	34	30	40	4	-1	2	2	6	4	1	21	29	32	18	11	19	3	4	2	-9	-3	7	15.2		
	Minimum...	-21	-2	15	18	20	13	3	27	12	-4	2	-10	-15	-16	-17	11	-19	-18	11	-2	8	9	2	-4	-13	-15	-2	-18	-27	-28	-30	5.0	
Sharon	Maximum...	9	30	21	36	32	39	35	34	32	30	40	17	6	10	9	9	2	9	25	30	26	35	22	19	16	2	2	-1	-11	-16	4	17.9	
	Minimum...	-16	-1	11	16	18	22	21	30	19	7	17	-5	-10	-5	2	0	-9	-14	-5	18	20	16	1	16	-2	-6	-1	-11	-25	-22	-25	2.5	
Steele	Maximum...	19	38	39	43	45	46	39	36	33	44	44	24	4	16	12	14	8	10	27	32	27	38	30	25	32	10	14	-1	-11	-4	-14	24.1	
	Minimum...	-2	14	11	20	20	25	20	30	21	11	22	-3	-10	-2	8	-1	-5	-15	3	19	14	10	-1	3	9	-1	-2	-11	-30	-18	-20	4.6	
Valley City	Maximum...	10	33	34	41	36	39	40	46	36	45	35	7	13	13	17	5	8	25	34	32	36	21	22	22	12	14	4	-1	1	1	10	6.4	
	Minimum...	-11	8	14	13	18	21	18	29	26	15	22	0	-5	0	7	5	-5	-8	-5	18	24	18	5	12	5	-1	4	-7	-21	-15	-19	23.0	
Wahpeton	Maximum...	13	35	29	41	35	38	37	36	35	35	36	33	9	12	17	17	6	15	31	32	28	33	30	23	30	10	8	-8	-8	-1	5	2.2	
	Minimum...	-15	-4	11	18	16	23	19	32	32	17	18	4	-3	2	6	4	-6	-8	0	22	18	20	17	11	5	-3	8	-8	-20	-17	-21	6.4	
Williston	Maximum...	24	38	42	41	39	40	38	37	32	41	43	3	5	13	14	10	10	23	33	34	26	37	32	36	37	22	20	-6	1	1	22	25.1	
	Minimum...	12	21	13	25	23	26	18	30	14	17	3	-7	-11	-2	7	-2	-2	-4	14	22	9	8	4	14	10	10	-6	-20	-25	-16	-7	6.5	

Daily Precipitation for December 1946

[illegible]

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 4-11-47-1050]

NT
55¹³

Nat Hist

MAY 12 1947

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LV BISMARCK, N. D., ANNUAL 1946 No. 13

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GENERAL SUMMARY

1946 was another good crop year. Rainfall for all the crop months, April-August, averaged slightly below normal, but June averaged slightly above normal, in the eastern section. The excellent crop yield was due in large part to the fact that precipitation occurred when most needed. Precipitation during September and October was considerably above normal. The October snowfall was the heaviest ever recorded in western North Dakota. 28.5 inches fell at Dunn Center. The snow did not remain on the ground long and mild conditions prevailed, with cattle in the fields until the snowstorm on December 16th. Long time records of heavy precipitation for September were broken at some stations in the eastern part of the state and many stations in the western part broke long time records during October. The temperature for the year averaged above normal, but with no prolonged hot periods. High temperature records for March were broken at many stations on the 27-28th, with readings above 80°.

The average temperature for the state was 40.8°, or 1.2° above the 1892-1946 average, and 1.8° higher than the 1945 average. The highest annual temperature reported was 45.2° at Marmarth; the lowest was 35.7° at Belcourt. The absolute range in temperature was 150° from 110° at Carson on July 26th to -40° at Willow City on February 2d.

The average precipitation for the state was 16.65 inches, or 0.45 inch below the 1892-1946 average, and 1.80 inches more than the average for 1945. The greatest annual precipitation reported was 26.96 inches at Selfridge: the least, 10.62 inches at Tagus. The greatest monthly amount was at Larimore in June. The average snowfall was 34.9 inches. The average number of days with 0.01 inch or more of precipitation was 78.

There were 136 clear day, 123 partly cloudy days, and 106 cloudy days. The prevailing wind was northwest.

CLIMATOLOGICAL SUMMARY, 1946

Month	Temperature in degrees Fahrenheit				Precipitation, in inches			Number of days				Prevailing direc- tion of the wind
	Mean	Departure	Highest	Lowest	Average	Departure	Snowfall	Precip., .01 inch or more	Clear	Pt. cloudy	Cloudy	
January	11.2	+4.3	56	-33	0.20	-0.27	2.9	4	10	11	10	nw.
February	10.4	+0.5	60	-40	0.66	+0.20	8.1	6	10	9	9	nw.
March	34.8	+10.8	86	-22	0.99	+0.19	2.9	5	11	10	10	nw.
April	48.2	+6.6	87	9	0.67	-0.75	2.4	4	14	11	5	nw.
May	50.6	-2.9	88	10	1.60	-0.70	.6	9	9	11	11	nw.
June	63.2	+0.4	100	26	3.06	-0.43	0	10	10	14	6	nw.
July	70.6	+1.6	110	34	2.17	-0.26	0	7	16	12	3	se.
August	65.2	-1.3	104	29	1.62	-0.46	0	7	16	10	5	nw.
September	56.3	-0.5	97	18	2.52	+0.95	T.	8	11	9	10	nw.
October	40.1	-4.0	91	2	2.23	-1.23	8.5	8	10	8	13	nw.
November	25.3	-1.4	68	-22	0.35	-0.25	3.3	4	12	8	10	nw.
December	13.3	-0.1	55	-35	0.58	+0.11	6.2	6	7	10	14	nw.
Annual ...	40.8	+1.2	110	-40	16.65	-0.45	34.9	78	136	123	106	nw.

ANNUAL COMPARATIVE DATA FOR THE STATE

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.8	108	-52	20.24	21.00	13.79	18.34	34.9	70	157	95	114
1893...	35.8	112	-54	18.02	16.33	13.19	15.85	46.1	65	154	104	107
1894...	40.3	107	-47	17.45	14.55	14.84	15.61	24.6	56	174	100	91
1895...	37.7	104	-50	18.41	16.97	16.69	17.36	20.9	63	155	117	93
1896...	37.3	107	-42	26.30	21.67	19.97	22.65	48.3	80	143	111	112
1897...	37.8	109	-48	18.75	16.04	13.26	16.02	33.9	63	162	105	98
1898...	39.2	106	-38	18.97	15.55	13.92	16.15	22.7	57	159	108	98
1899...	36.9	109	-48	17.40	19.48	15.98	17.62	26.6	60	161	105	99
1900...	40.9	114	-48	21.61	18.70	16.88	19.06	23.2	62	178	97	90
1901...	40.4	110	-43	24.35	17.54	16.33	19.41	20.2	63	175	92	98
1902...	39.4	106	-39	21.66	18.50	17.89	19.35	29.9	62	160	79	126
1903...	38.3	108	-49	20.18	18.27	19.28	19.24	28.8	65	166	81	118
1904...	37.6	103	-52	21.59	18.26	13.50	17.81	38.1	68	150	73	143
1905...	39.3	107	-46	23.23	19.17	14.34	18.91	29.6	66	152	79	134
1906...	39.4	109	-40	21.14	17.68	21.28	20.03	35.4	78	164	98	108
1907...	36.9	104	-49	17.17	13.06	12.60	14.31	33.7	63	175	101	89
1908...	40.7	104	-41	18.84	17.77	19.05	18.55	43.7	75	164	97	105
1909...	33.2	109	-48	21.79	15.89	16.61	18.10	33.5	71	143	110	112
1910...	41.1	114	-50	11.88	12.17	13.56	12.64	21.0	52	180	92	93
1911...	38.0	108	-43	21.73	18.60	14.94	18.42	36.5	76	160	100	105
1912...	38.2	118	-62	22.72	19.73	18.71	20.39	19.3	74	161	102	103
1913...	40.0	106	-54	17.85	13.39	12.70	14.65	19.4	64	166	104	95
1914...	40.1	109	-47	19.81	19.57	17.53	18.97	30.0	70	155	110	106
1915...	39.7	104	-48	21.06	19.06	17.72	19.23	21.2	72	148	101	116
1916...	36.2	105	-56	24.11	18.88	16.63	19.87	54.2	70	170	97	99
1917...	36.3	114	-48	12.61	10.44	9.20	10.75	40.5	60	154	111	100
1918...	40.0	102	-44	18.01	16.00	14.01	16.01	29.7	63	159	104	102
1919...	33.6	108	-44	20.55	14.71	11.51	15.59	47.2	60	165	107	83
1920...	39.5	108	-44	17.67	14.26	13.92	15.28	27.9	64	166	108	82
1921...	42.0	110	-33	23.05	18.96	16.30	19.44	29.4	74	158	111	96
1922...	39.7	115	-46	21.97	19.09	18.62	19.89	42.8	75	155	100	110
1923...	40.7	103	-40	19.12	16.65	17.60	17.79	30.1	64	160	110	95
1924...	38.2	103	-46	20.23	16.39	14.74	17.12	26.1	65	158	101	107
1925...	40.6	111	-39	21.91	14.74	13.29	16.65	19.7	64	158	107	100
1926...	40.7	108	-36	18.05	14.40	13.65	15.37	23.7	68	151	105	109
1927...	38.0	101	-44	22.72	21.25	20.56	21.51	36.2	79	150	102	113
1928...	41.1	107	-41	20.03	18.12	15.48	17.88	17.3	59	177	101	88
1929...	38.0	109	-44	15.09	13.27	14.57	14.31	41.8	65	171	98	96
1930...	41.4	107	-43	17.13	14.19	13.36	14.89	25.0	66	166	101	98
1931...	44.9	111	-31	18.48	14.10	12.41	15.00	18.0	56	180	92	93
1932...	40.0	108	-34	18.43	16.39	16.71	17.18	34.9	69	156	108	102
1933...	41.1	110	-45	14.01	12.74	13.59	13.45	42.2	65	161	104	100
1934...	43.4	112	-44	13.33	8.61	6.60	9.51	15.2	54	160	109	96
1935...	39.4	110	-44	21.24	17.97	14.91	18.04	33.3	77	137	113	115
1936...	38.8	121	-60	10.09	8.21	8.18	8.83	35.2	59	171	110	85
1937...	39.1	111	-44	20.10	17.37	13.63	17.03	36.0	69	150	111	104
1938...	41.9	109	-41	15.27	14.60	16.13	15.33	30.6	73	149	116	100
1939...	41.9	108	-46	15.56	13.88	13.01	14.15	25.5	71	161	109	95
1940...	41.0	107	-39	19.23	16.79	16.14	17.39	33.6	80	142	110	114
1941...	42.2	111	-40	25.07	22.42	22.19	23.23	25.1	92	128	115	122
1942...	40.9	105	-35	22.40	17.62	16.22	18.75	35.3	84	128	114	123
1943...	39.8	104	-44	18.89	18.58	17.63	18.38	41.0	76	157	109	99
1944...	41.0	103	-43	24.55	20.75	19.05	21.45	29.3	79	151	109	106
1945...	39.0	105	-38	16.46	14.56	13.53	14.85	31.8	77	131	118	116
1946...	40.8	110	-40	19.33	15.89	14.73	16.65	34.9	78	136	123	106
Period	39.6	121	-60	19.40	16.56	15.33	17.10	31.1	68	158	103	104

THE WEATHER BY MONTHS

JANUARY.—Although the temperature averaged more than 4° above normal, January was a rather disagreeable month due to high winds and blowing snow. Precipitation averaged light. The snow cover at the end of January ranged from about 2 inches in the southwestern part of the state to 15 inches in the Grand Forks area. Considerable feeding of livestock was necessary.

FEBRUARY.—A severe blizzard occurred in the Red River Valley on February 5-6. Highways and railroads were blocked in the northern and eastern counties, and in the Red River Valley the snow was piled into huge drifts. Temperatures in the western part of the state averaged considerably higher than in the eastern part. The precipitation averaged above normal due to heavy snow in eastern and some northern counties, but there was little precipitation in the southwestern counties. The heavy snowfall in

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HIST.

THE WEATHER BY MONTHS—Continued

the eastern part of the state interfered with marketing of grain and livestock.

MARCH.—Temperatures were above the seasonal normal every day, except in the east portion where minus departures occurred from the 4th to the 10th. Moisture was unevenly distributed with only traces reported from most of Williams County, while the south-central and southwestern counties had heavy, wet snowfalls. During the last 10 days of the month most farmers in the central and southern parts of the state were in the fields sowing wheat or preparing the seed bed. The Missouri and Red rivers broke up during the last week. There was considerable flooding of farm land in the Red River Valley.

APRIL.—The warm cycle that began early in the year continued throughout April. Precipitation was light. The snowfall on the 3d in the southeastern part of the state was unusually heavy for so late in the season. Wind velocity was above normal for the month. Spring wheat and other grains were planted by the close of the month and some of the early planted wheat was up. Pastures and hay meadows were greenings slowly due to continued dry weather. Most of the state was in need of moisture.

MAY.—The first three weeks of May were cold, with freezing temperatures on many days between the 5th and 15th. Precipitation was mostly light, but heavy showers occurred at some places, mostly in the east and southwest portions. The precipitation was light over the north-central and extreme southeast portions where the total amount was less than one inch. Crops were well advanced at the beginning of the month due to the warm weather during April, but much damage was done by frosts during May. Fruit was severely damaged. Much early planted flax and sugar beets had to be replanted. Small grain was also frozen but generally made a good recovery. Pastures were short.

JUNE.—June rainfall averaged only slightly below normal, but the first three weeks were the driest ever recorded in June at many stations in the central and west portions. During the last week, heavy to excessive rains occurred attended by severe local storms, but the drought was broken and crops began a remarkable comeback. Temperatures averaged only slightly above the seasonal normal. On the other hand, unusually low temperatures were recorded on the 1st and 2d with frost and freezing temperatures. Except for tender vegetation, little crop damage resulted.

JULY.—The temperature for the state averaged slightly above normal with precipitation averaging slightly below normal. Beneficial showers fell when most needed for the small grain crop, with the result of well filled heads of spring wheat and an above normal harvest of wheat, barley and oats well under way at the close of the month. The heaviest rainfall occurred over the western part of the state.

AUGUST.—Temperatures averaged below normal. The unseasonably low temperatures recorded on the 11th did but slight damage as was the case again on the 29th, when some local frost was reported. Rainfall continued below normal with damage to late crops. The heavy precipitation reported on the 26th from scattered areas in Steele, Traill and Grand Forks counties came as thunderstorms with more than 3.00 inches falling in a six hour period. It was an ideal month for harvesting with 80 per cent of the small grain crop threshed or combined at the close of the month; yields and quality were excellent.

SEPTEMBER.—The first general killing frost occurred on the 28th and 29th, while light frost occurred at many places on the 1st and 2d. Rainfall was above normal, except at a few north-

western stations. This was beneficial for pastures, trees and shrubs after the dry August. Unusually heavy precipitation occurred at some eastern stations.

OCTOBER.—Precipitation was heavy with an unusually early and heavy snowfall on the 7th, especially over the west and central portions. The snow melted rapidly, but delayed potato and beet harvest. The soil was saturated with moisture.

NOVEMBER.—Precipitation was light, except in the southeastern counties, where heavy rains for November occurred on the 7th. There was little or no precipitation over the rest of the state until the 20th when light snowfalls were general. The smaller streams and ponds froze over early in the month, while the Missouri River froze on the 21st. More than the usual amount of fall plowing was accomplished in the southeastern part of the state.

DECEMBER.—Precipitation and snowfall were nearly normal in the east and middle divisions, but above normal in the west. Sunshine was less than half the normal. Schools in some eastern areas were closed during the storm on the 16th. Ice harvest was under way at the close of the month. Because of the relatively open winter, livestock were in good condition.

KILLING FROSTS

STATIONS	Last in Spring	First in Autumn	STATIONS	Last in Spring	First in Autumn
<i>Eastern Div.</i>					
Arvilla	June 2	Sept. 2	Maddock	June 2	Sept. 28
Carrington	June 2	Sept. 2	Mandan	May 12	Sept. 28
Cassellton	May 15	Sept. 29	Max	May 12	Sept. 28
Cavalier	June 1	Sept. 11	McClusky	June 2	Sept. 28
Cooperstown	June 1	Sept. 29	Minot	May 12	Sept. 28
Devils Lake	May 15	Sept. 28	Mohall	May 24	Sept. 2
Edgeley	June 2	Sept. 2	Napoleon	June 2	Sept. 28
Edmore	May 24	Sept. 1	New Salem	May 12	Sept. 28
Ellendale	June 2	Sept. 29	Pettibone	June 2	Sept. 1
Fargo	May 15	Sept. 29	Rolla	May 15	Sept. 2
Forman	June 15	Sept. 29	Steele	June 12	Sept. 28
Fullerton	June 15	Sept. 29	Towner	June 2	Sept. 1
Grafton	June 15	Sept. 28	Turtle Lake	June 2	Sept. 28
Grand Forks	June 12	Sept. 29	Underwood	June 2	Sept. 1
Hankinson	June 1	Oct. 7	Velva	June 2	Sept. 28
Hannah	May 24	Sept. 1	Washburn	May 12	Sept. 28
Hillsboro	May 15	Oct. 7	Westhope	May 24	Sept. 1
Jamestown	June 2	Sept. 29	Willow City	June 16	Sept. 2
Langdon	June 2	Sept. 1	Willon	June 24	Sept. 28
Larimore	May 15	Oct. 7	Wishek	June 2	Sept. 2
Lisbon	May 15	Sept. 29	<i>Western Div.</i>		
Mayville	June 15	Oct. 7	Almont	May 12	Sept. 28
McHenry	June 1	Sept. 2	Amidon	June 2	Sept. 24
McLeod	May 16	Sept. 29	Bowbells	May 24	Sept. 1
Oakes	May 15	Sept. 29	Bowman	May 12	Sept. 24
Park River	May 15	Sept. 28	Crosby	June 2	Sept. 1
Pembina	May 15	Sept. 2	Dickinson	May 13	Sept. 1
Petersburg	June 2	Sept. 28	Dunn Center	May 24	Sept. 2
Sharon	May 15	Sept. 28	Elbowoods	May 24	Sept. 1
Valley City	May 15	Sept. 28	Epping	May 15	Sept. 1
Wahpeton	May 15	Oct. 12	Fryburg	May 15	Sept. 28
<i>Middle Div.</i>					
Ashley	June 2	Sept. 29	Golva	May 24	Aug. 29
Bisbee	May 14	Sept. 2	Grenora	May 15	Sept. 28
Bismarck	May 12	Sept. 28	Hettinger	June 2	Aug. 29
Bottineau	May 15	Sept. 1	Kenmare	May 24	Sept. 29
Butte	June 2	Sept. 28	Marmarth	May 15	Sept. 1
Carson	June 2	Sept. 28	Medora	May 11	Sept. 28
Center	June 2	Sept. 1	Mott	May 12	Sept. 2
Drake	June 2	Sept. 28	New England	May 12	Sept. 28
Dunseith	May 15	Sept. 28	New Hradec	May 24	Sept. 1
Eckman	May 24	Sept. 1	Parshall	May 24	Sept. 1
Fessenden	May 15	Sept. 28	Portal	May 24	Sept. 1
Fort Yates	June 2	Sept. 29	Powers Lake	June 2	Sept. 1
Foxholm	May 12	Sept. 28	Richardton	May 14	Sept. 28
Garrison	May 12	Sept. 28	Sanish	May 24	Sept. 1
Granville	June 2	Sept. 28	Stanley	June 3	Sept. 1
Hansboro	May 24	Sept. 1	Van Hook	May 24	Sept. 1
Leeds	June 2	Sept. 2	Watford City	May 24	Sept. 2
Linton	June 2	Sept. 29	Williston	May 15	Sept. 28

MONTHLY AMOUNTS OF EVAPORATION—inches, and WIND MOVEMENT—miles, FOR 1946

Station	Data	Apr.	May	June	July	Aug.	Sept.	Seasonal	Average	Observer
Dickinson	Evaporation	5.554	5.407	6.463	8.237	8.094	4.716	38.471	40 years	Agri. Experiment Substa.
	Wind movement	4.305	4.415	3.615	3.700	3.530	3.110	22.675	34.704	
Mandan	Evaporation	4.714	4.860	5.441	6.947	6.656	4.205	32.823	33 years	No. Gr. Plains Field Sta.
	Wind movement	4.263	4.504	3.316	3.261	3.571	3.682	22.597	33.436	

Climatological Data for the Year 1946

Stations	County	Elevation, feet	Temperature (degrees Fahrenheit)						Precipitation (inches)						Number of days					Prevailing direction of wind
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	With. 0.1 in or more precip.	Clear	Pt. cloudy	Cloudy	
Eastern Division																				
Carrington	Foster	1,579	49	40.6	104	Aug. 2	-29	Feb. 2	49	16.41	3.27	Sept.	0.05	Nov.	40.9	78	126	93	146	.....
Casselton	Cass	934	51	41.5	100	Aug. 2	-28	Feb. 2	51	21.31	3.99	Sept.	0.23	Jan.	50.1	85	132	174	59	n.
Cavaler	Pembina	894	11	38.4	102	Aug. 2	-28	Feb. 2	39	14.83	3.96	Sept.	0.12	Feb.	23.2	52	81	210	74	se.
Cooperstown	Griggs	1,423	50	39.4	99	Aug. 2	-36	Feb. 2	50	19.69	6.40	Sept.	0.19	Nov.	26.1	63	134	92	139	nw.
Devils Lake	Ramsey	1,471	42	39.2	99	Aug. 2	-29	Feb. 2	71	13.67	3.04	Sept.	0.20	Nov.	30.0	100	98	117	150	nw.
Edgeley, 2 mi. S	LaMoure	1,568	46	41.2	100	Aug. 2	-27	Feb. 13	46	21.89	6.65	Sept.	0.11	Jan.	32.4	89	123	162	80	nw.
Edmore, 1½ mi. W	Ramsey	1,524	23	36.1	96	Aug. 2	-39	Feb. 2	23	17.74	5.05	June	0.17	Dec.	22.1	75	211	61	93	nw.
Ellendale	Dickey	1,457	48	41.9	96	June 6†	-24	Feb. 13	48	23.69	4.44	Sept.	0.16	Jan.	41.5	78	143	80	142	nw.
Fargo Airport, 2½ mi. NNW	Cass	895	66	41.0	98	Aug. 2	-27	Jan. 15†	66	19.72	4.03	June	0.32	Jan.	40.5	104	80	139	146	sw.
Forman	Sargent	1,249	55	42.6	95	Aug. 2	-27	Feb. 2	55	24.00	5.46	July	0.07	Jan.	38.0	74	164	107	94	sw.
Fullerton	Dickey	1,439	49	42.7	97	June 6	-25	Feb. 13	49	23.70	4.33	Sept.	0.10	Jan.	54.4	85	135	133	97	s.
Grafton	Walsh	827	55	40.2	101	Aug. 2	-28	Feb. 2	55	20.30	4.79	Sept.	0.37	Feb.	35.1	87	144	125	96	nw.
Grand Forks, 2 mi. W.	Grand Forks	830	56	39.8	101	Aug. 2	-29	Feb. 2	56	21.17	4.90	Aug.	0.43	Jan.	32.8	93	123	106	136	nw.
Grand Fks Airport, 2½ mi. W	Grand Forks	834	6	38.8	100	Aug. 2	-31	Feb. 2	6	19.43	4.67	Aug.	0.28	Apr.	28.7	103	86	110	169	s.
Hankinson	Richland	1,068	18	41.8	100	Aug. 2	-25	Jan. 16†	18	16.53	2.81	June	0.14	Jan.	40.8	73	135	80	150	nw.
Hannah	Cavaler	1,568	53	36.2	96	Aug. 2	-33	Feb. 2	53	17.94	3.20	Sept.	0.12	Dec.	42.9	67	39	244	82	nw.
Hillsboro	Trall	901	41	41.2	99	Aug. 2	-29	Jan. 15	41	23.50	6.60	Sept.	0.36	Mar.	46.6	85	110	150	105	nw.
Jamestown, 2 mi. SE	Stutsman	1,457	55	41.2	101	Aug. 2	-29	Feb. 2	55	19.71	5.56	Sept.	0.05	Nov.	31.5	69	158	96	111	nw.
Jamestown Airport, 2 mi. NE	Stutsman	1,493	6	40.5	98	Aug. 2	-28	Feb. 2	6	21.27	5.77	Sept.	0.12	Nov.	33.6	101	110	105	150	nw.
Kensal, 7 mi. SW	Stutsman	1,440	6	39.8	102	Aug. 2	-31	Feb. 2	6	15.74	3.77	Sept.	0.05	Nov.	28.3	61	145	116	104	nw.
Langdon, 1½ mi. SE	Cavaler	1,615	51	37.3	100	Aug. 2	-35	Feb. 2	51	15.95	3.27	Sept.	0.41	Dec.	39.0	106	155	115	95	nw.
Larimore	Grand Forks	1,134	54	38.8	100	Aug. 2	-29	Feb. 2	54	17.24	7.32	June	T.	Jan.	21.9	52	121	98	146	nw.
Lisbon	Ransom	1,091	43	41.6	96	Aug. 2	-28	Feb. 2	43	21.89	3.75	June	0.08	Jan.	56.2	92	151	45	169	nw.
Mayville	Trall	975	51	41.2	101	Aug. 2	-29	Feb. 2	51	20.17	4.77	June	0.27	Jan.	32.0	99	109	154	102	n.
McHenry, 6 mi. NNE	Eddy	1,509	24	38.4	98	Aug. 2	-33	Feb. 2	24	17.03	3.20	Sept.	0.09	Nov.	29.8	85	143	103	119	nw.
McLeod, 3 mi. E.	Ransom	1,075	35	41.6	97	Aug. 2	-30	Feb. 2	35	21.13	4.13	Sept.	0.06	Jan.	35.7	64	198	72	95	n.
Oakes	Dickey	1,318	18	42.2	99	Aug. 2	-25	Feb. 2†	18	22.31	3.18	July	0.10	Jan.	50.1	92	153	122	90	nw.
Park River	Walsh	998	43	38.4	101	Aug. 2	-31	Feb. 2	43	17.07	4.73	Sept.	0.11	Dec.	15.9	63	182	86	97	nw.
Pembina, 1 mi. S	Pembina	795	73	37.0	98	Aug. 2	-33	Jan. 26	73	17.00	4.90	Sept.	0.22	Feb.	20.3	66	69	144	152	s.
Petersburg	Nelson	1,524	3	38.2	99	Aug. 2	-32	Feb. 2	16	18.60	5.82	June	0.12	Jan.	16.7	74	148	147	70	nw.
Sharon	Steele	1,516	20	39.6	99	Aug. 2	-29	Feb. 2	23	22.79	6.04	Aug.	0.27	Nov.	31.8	92	129	125	111	nw.
Valley City	Barnes	1,229	42	42.2	97	Aug. 2	-27	Feb. 2	42	23.56	5.52	Sept.	0.27	Jan.	48.9	99	168	95	102	nw.
Wahpeton	Richland	962	55	42.5	96	Aug. 2	-29	Feb. 2	55	17.68	3.46	June	0.08	Jan.	39.1	85	161	108	96	nw.
Middle Division																				
Ashley, 1 mi. SE	McIntosh	2,025	51	40.5	98	July 31	-27	Dec. 29	51	22.12	4.17	Sept.	0.13	Jan.	27.2	96	104	123	138	nw.
Bisbee	Towner	1,601	44	38.2	100	July 29†	-32	Feb. 2	44	13.01	2.12	Oct.	0.33	Nov.	49.9	64	169	80	116	nw.
Bismarck	Burleigh	1,670	72	43.3	103	July 31	-26	Dec. 29	72	16.23	3.02	June	0.07	Jan.	33.8	80	96	110	159	nw.
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	7	42.7	104	July 31	-27	Dec. 29	7	15.85	2.99	June	0.07	Jan.	31.7	100	96	110	159	nw.
Bottineau	Bottineau	1,638	55	38.0	100	July 31	-34	Dec. 29	55	11.69	2.72	June	0.14	Apr.	25.8	70	148	107	110	nw.
Butte, 3 mi. WSW	McLean	1,880	22	41.2	102	July 31	-28	Feb. 2	22	15.74	3.49	Oct.	0.13	Nov.	49.8	71	155	75	135	nw.
Carson, 2½ mi. SW	Grant	2,500	35	43.1	110	July 26	-23	Dec. 29	35	21.40	3.95	June	0.01	Jan.	37.5	80	127	152	86	nw.
Center	Oliver	2,100	9	40.6	105	July 31	-34	Dec. 29	9	18.80	3.66	June	0.10	Nov.	40.2	81	132	171	72	nw.
Drake	McHenry	1,634	17	39.6	103	July 31	-30	Feb. 2†	17	14.53	2.88	June	0.23	Nov.	40.1	70	197	134	34	nw.
Dunseith, 2 mi. NNE	Rolette	1,682	51	37.9	98	July 31	-33	Dec. 29	51	11.32	2.88	July	0.03	Apr.	16.2	45	131	147	87	nw.
Eckman	Bottineau	1,500	41	37.3	99	July 31	-38	Feb. 2	41	12.78	3.65	June	0.21	Apr.	34.2	75	131	131	103	nw.
Fessenden	Wells	1,610	35	40.6	102	July 31	-31	Feb. 2	35	16.90	2.62	May	0.31	Nov.	41.5	72	144	125	96	n.
Port Yates	Sioux	1,670	47	44.6	104	July 31	-23	Dec. 29	47	21.30	3.52	Mar.	T.	Jan.	24.0	59	207	85	73	nw.
Foxholm, 6½ mi. NE	Ward	1,609	22	40.6	99	July 31†	-35	Feb. 2	26	13.75	3.07	Aug.	0.16	Jan.	41.0	75	112	109	144	nw.
Garrison	McLean	1,911	70	41.1	102	July 31	-27	Dec. 29	70	14.87	2.85	Oct.	0.22	Apr.	55.0	86	104	116	145	nw.
Granville	McHenry	1,504	40	40.4	98	July 31	-35	Feb. 2	40	10.94	2.29	Oct.	0.20	Nov.	31.8	76	232	66	67	nw.
Hansboro	Towner	1,597	39	36.4	98	July 31	-31	Feb. 2	39	11.90	3.04	July	0.14	Nov.	37.3	65	110	161	94	nw.
Leeds	Benson	1,515	6	39.0	101	July 31	-35	Feb. 2	6	14.13	2.41	June	0.05	Nov.	29.1	66	92	189	84	w.
Linton	Emmons	1,711	30	44.4	103	July 31	-25	Dec. 29	30	22.34	4.40	June	0.03	Nov.	25.2	90	126	95	144	nw.
Madock, 1 mi. E	Benson	1,604	32	39.6	100	July 31	-36	Feb. 2	32	19.69	5.28	July	0.17	Nov.	33.7	75	90	168	107	nw.
Mandan, 1½ mi. SW	Morton	1,750	33	42.6	105	July 31	-25	Dec. 29	33	16.75	3.14	June	0.04	Jan.	36.6	84	136	72	157	nw.
Max	McLean	2,093	18	39.6	101	July 31	-29	Dec. 29	18	11.02	2.07	June	0.12	Nov.	31.1	69	147	72	146	nw.
McCluskey	Sheridan	1,943	22	41.8	97	Aug. 2	-29	Dec. 29	22	17.44	5.53	June	0.09	Nov.	31.8	77	133	108	124	nw.
Minot Airport, 1 mi. N	Ward	1,724	51	40.4	101	July 31	-28	Dec. 29	51	11.64	2.24	July	0.20	May	42.3	88	79	108	178	nw.
Mohall	Renville	1,646	53	38.8	100	July 31	-33	Feb. 2	53	13.11										

Monthly and Annual Mean Temperatures for the Year 1946, with Departures from the Normal

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.
Eastern Division																										
Arvilla	5.2	.....	5.7	.....	35.0	.....	47.3	.....	52.3	.....	63.6	.....	70.6	.....	66.2	.....	56.3	.....	41.2	.....	24.6	.....	10.4	.....	39.9	.....
Carrington	7.2	+0.5	6.1	-2.8	34.4	+10.7	47.6	+8.0	50.6	-2.5	64.4	+1.0	72.2	+2.8	66.4	-0.7	56.6	-0.3	43.2	-0.5	25.0	-2.3	12.5	-0.1	40.6	+1.2
Cassellton	7.4	+2.4	8.2	-0.9	37.0	+12.3	47.4	+5.6	51.7	-3.0	65.2	+1.3	71.8	+1.9	66.6	-0.5	57.2	-0.7	43.5	-1.2	28.2	+1.2	13.3	+0.5	41.5	+1.6
Cavalier	3.2	+1.8	2.5	-3.6	30.0	+9.0	46.3	+7.1	52.3	-1.3	63.2	+0.6	70.0	+1.0	65.8	-0.1	55.7	+0.1	40.6	-2.4	24.1	-0.6	6.8	-3.7	38.4	+0.7
Cooperstown	5.2	+0.9	5.6	-2.2	34.9	+10.6	46.4	+6.1	50.7	-3.1	63.2	0.0	68.6	-1.0	65.4	-2.0	55.2	-2.5	41.2	-3.5	25.0	-2.3	11.8	-1.2	39.4	0.0
Devils Lake	6.0	+4.2	4.4	-0.7	32.2	+12.4	47.1	+8.3	50.9	-1.7	63.5	+1.6	70.6	+3.2	64.8	0.0	56.0	+0.1	40.2	-2.2	23.8	-0.7	11.1	+1.6	39.2	+2.2
Edgely	10.2	+1.4	9.2	-3.6	36.8	+9.5	48.5	+5.9	51.1	-3.3	64.2	+0.6	69.6	-0.3	64.9	-2.8	56.8	-1.5	41.2	-4.4	27.2	-2.1	15.1	+0.1	41.2	-0.1
Edmore	1.9	+1.7	1.4	-3.4	30.2	+9.1	44.8	+5.5	48.8	-4.4	60.2	-2.1	66.8	-0.7	61.3	-3.5	53.2	-3.2	37.3	-5.2	20.6	-4.0	6.5	-4.0	36.1	-1.2
Ellendale	9.6	-0.4	10.8	-2.3	37.6	+10.4	49.2	+6.5	51.3	-4.0	64.2	-0.6	70.1	-0.8	65.8	-2.9	57.6	-1.2	42.8	-3.1	28.0	-4.4	15.6	-0.7	41.9	+0.1
Fargo Airport	8.0	+4.2	6.7	-1.4	34.7	+12.0	47.4	+6.8	51.8	-3.3	64.6	+0.2	71.2	+3.1	66.4	+0.3	57.2	-1.0	43.4	-1.1	27.4	+0.3	12.2	+0.7	41.0	+1.8
Forman	9.6	+2.5	10.6	+0.7	36.8	+10.8	49.4	+6.8	52.0	-3.7	65.7	+0.7	72.6	+2.5	66.9	-1.3	58.5	-1.0	44.6	-1.4	28.6	0.0	16.0	+0.7	42.6	+1.3
Fullerton	10.8	+1.7	12.0	-0.4	37.8	+10.7	50.0	+7.3	52.4	-2.4	65.8	+1.6	70.6	+0.4	66.4	-1.6	57.2	-0.8	43.0	-2.3	28.9	0.0	17.0	+1.8	42.7	+1.4
Grafton	5.2	+2.6	5.2	-2.1	34.1	+12.4	48.0	+7.4	53.0	-1.1	64.0	+0.3	70.7	+1.9	67.4	+1.2	56.8	-0.2	42.0	-1.8	25.0	0.0	10.4	-0.3	40.2	+1.7
Grand Forks	5.6	+2.0	4.0	-3.7	33.6	+11.1	47.0	+5.7	52.0	-2.2	64.0	+0.6	71.8	+3.3	66.6	+0.6	55.4	-1.5	43.1	-0.6	24.6	-1.2	9.1	-1.9	39.8	+1.1
Grand Forks Airport	4.4	.....	3.9	.....	32.4	.....	46.0	.....	51.0	.....	62.6	.....	70.0	.....	65.5	.....	55.2	.....	41.3	.....	24.5	.....	9.0	.....	38.8	.....
Hankinson	11.4	+3.5	9.4	-4.7	34.9	+6.3	47.9	+4.4	51.9	-6.1	65.7	-1.2	71.4	0.0	66.6	-4.1	56.6	-3.9	43.7	-2.9	27.3	-1.6	14.9	-2.8	41.8	-1.1
Hannah	2.2	+3.4	1.0	-1.6	29.2	+10.0	44.7	+6.8	49.7	-1.9	59.7	-0.8	67.1	+0.9	62.6	-1.5	55.2	+0.4	37.7	-3.1	19.4	-1.3	5.6	-2.0	36.2	+0.8
Hillsboro	7.8	+2.9	7.4	-2.8	35.4	+10.1	48.4	+6.2	52.6	-2.2	64.5	-0.2	70.8	+0.1	67.0	-1.2	57.2	-1.8	43.4	-1.8	27.8	+0.5	12.4	+4.4	42.7	+1.2
Jamestown	8.8	+1.7	8.6	-1.3	35.6	+11.2	48.8	+7.1	51.0	-3.1	64.6	+0.9	71.3	+1.7	65.0	-1.3	56.6	-0.4	42.3	-2.4	27.4	+0.1	14.2	+0.3	41.2	+1.2
Jamestown Airport	9.0	.....	7.6	.....	35.3	.....	47.7	.....	49.9	.....	64.0	.....	70.6	.....	64.8	.....	56.2	.....	41.0	.....	26.4	.....	13.3	.....	40.5	.....
Kensal	7.7	.....	6.9	.....	33.4	.....	47.9	.....	49.9	.....	62.1	.....	68.2	.....	65.7	.....	55.7	.....	40.5	.....	25.9	.....	13.6	.....	39.8	.....
Langdon	3.6	+4.0	2.1	-2.7	30.6	+10.8	46.0	+8.4	50.7	-1.1	61.6	+1.0	68.0	+1.7	64.2	+0.5	54.4	+0.9	38.6	-2.3	19.9	-3.8	7.8	-1.0	37.3	+1.4
Larimore	5.0	+1.2	3.2	-4.5	31.6	+8.9	44.8	+4.6	51.6	-1.8	62.4	-0.5	68.5	+0.4	65.2	-0.7	55.8	-0.6	41.2	-2.9	25.6	-0.2	11.2	-0.3	38.8	+0.3
Lisbon	9.8	+2.2	10.4	-1.2	37.6	+10.3	47.0	+4.9	50.5	-4.3	65.0	+0.6	70.7	+0.3	65.2	-2.6	56.6	-1.5	43.4	-1.3	28.7	-0.1	15.2	+0.4	41.6	+0.6
Mayville	6.4	+0.4	7.4	-2.4	36.0	+11.3	48.8	+6.3	53.2	-2.2	64.5	0.0	71.2	+1.0	68.0	+0.1	56.9	-1.6	43.4	-2.6	27.4	-0.4	11.4	-1.9	41.2	+0.6
McHenry	5.0	+3.5	4.9	-0.5	32.1	+9.1	46.4	+5.8	50.0	-2.7	61.5	-0.3	68.8	+0.7	63.8	-1.9	54.6	-1.2	39.8	-3.5	23.6	-3.0	10.1	-0.7	38.4	+0.5
McLeod	7.6	-0.7	10.0	-3.0	36.6	+8.8	47.8	+4.2	51.6	-4.2	66.3	+1.0	70.8	-0.6	67.0	-1.5	57.1	-2.5	43.2	-3.3	28.3	-1.4	12.5	-2.6	41.6	-0.4
Oakes	9.8	+0.9	8.6	-4.3	36.5	+8.8	49.2	+6.4	52.4	-3.2	66.0	-0.7	72.2	+0.5	67.6	-1.5	57.8	-1.2	43.0	-3.0	27.6	-1.0	14.9	-1.3	42.2	+0.2
Park River	3.0	+0.1	1.4	-6.3	31.2	+8.4	45.0	+4.5	50.2	-3.4	62.8	-0.3	70.1	+1.6	66.2	-0.4	56.1	-0.8	41.2	-2.5	24.0	-3.0	9.6	-1.5	38.4	+0.3
Pembina	2.6	+5.0	1.0	-1.8	30.7	+12.3	44.8	+6.3	50.4	-2.8	61.9	-0.9	68.0	+0.2	64.1	-0.6	54.6	-0.1	39.5	-2.1	21.4	-2.0	5.1	-1.9	37.0	+1.0
Petersburg	4.2	.....	4.1	.....	32.4	.....	45.1	.....	50.4	.....	61.5	.....	68.8	.....	64.0	.....	54.4	.....	39.8	.....	24.0	.....	8.8	.....	38.2	.....
Sharon	4.9	+1.4	6.0	-3.5	34.9	+10.7	46.8	+7.2	51.4	-2.7	63.6	+0.6	70.6	-0.2	65.4	-2.5	55.2	-2.2	41.1	-2.5	24.5	-0.2	10.2	-2.0	39.6	+0.4
Valley City	9.5	+3.4	10.6	-0.9	37.9	+11.6	49.9	+7.5	52.6	-2.0	65.7	+1.6	70.5	+0.4	66.0	-1.7	57.4	-1.4	43.4	-1.7	28.4	+0.4	14.7	+0.2	42.2	+1.4
Wahpeton	7.8	-0.9	8.3	-4.1	36.0	+8.4	49.8	+5.6	53.5	-2.8	65.6	-0.2	71.7	+0.8	68.5	-0.2	58.8	-1.2	46.0	-1.0	29.1	+0.1	14.8	-1.0	42.5	+0.3
Middle Division																										
Ashley	10.5	+1.8	9.8	-1.6	36.4	+11.5	47.2	+4.8	49.2	-5.0	63.2	0.0	69.1	-0.6	63.4	-3.8	55.5	-2.4	39.8	-4.6	26.8	-1.2	15.5	+0.7	40.5	-0.1
Bisbee	5.0	+3.2	4.8	-1.7	30.6	+8.1	46.6	+5.9	51.3	-1.4	61.7	-0.4	69.9	+2.5	64.4	-1.3	55.4	-1.3	38.6	-5.2	19.7	-6.7	9.8	-0.1	38.2	+0.2
Bismarck	12.9	+4.9	13.7	+2.1	38.4	+13.2	51.0	+7.9	51.6	-3.2	65.3	+1.1	73.4	+2.9	66.8	-1.4	58.6	+0.5	42.0	-3.2	28.3	-0.2	17.4	+1.7	43.3	+2.2
Bismarck Airport	11.8	+5.5	12.4	+3.9	37.6	+15.7	50.6	+10.2	51.6	-1.4	65.2	+2.3	73.6	+4.2	66.8	+0.1	58.1	+0.8	40.9	-2.7	27.8	+1.3	16.4	+0.6	42.7	+0.7
Bottineau	8.4	+7.0	5.2	+0.3	30.3	+9.5	47.0	+8.0	50.9	-1.4	62.5	+0.7	68.6	+1.0	63.2	-1.7	55.4	-0.1	36.5	-4.9	20.2	-3.4	7.4	-0.9	38.0	+1.2
Butte	12.8	+4.9	10.0	-3.1	33.9	+7.5	49.4	+8.1	51.3	-3.5	63.5	+1.0	70.9	+0.9	65.7	-1.5	57.1	-0.4	40.8	-4.0	25.1	-1.4	15.2	+0.4	41.2	+1.6
Carson	15.6	+5.5	15.6	+1.1	36.6	+9.9	49.8	+7.3	50.0	-4.5	63.9	+2.2	72.2	+1.4	66.2	-2.4	57.6	-0.5	41.5	-3.0	28.6	-1.2	19.4	+2.8	43.1	+1.4
Center	11.5	.....	11.6	.....	35.8	.....	48.3	.....	49.2	.....	63.2	.....	70.0	.....	64.4	.....	54.7	.....	38.9	.....	25.9	.....	14.8	.....	40.6	.....
Drake	9.4	+3.9	6.6	-3.8	31.5	+6.8	48.2	+7.8	51.1	-3.6	63.2	-0.6	70.8	-0.8	65.0	-2.6	56.4	-1.2	38.7	-4.4	22.5	-3.4	11.2	-4.2	39.6	-0.5
Dunseith	6.8	+4.0	5.1	-1.6	30.6	+10.1	46.6	+5.1	50.8	-2.0	61.4	0.0	67.8	+0.8	63.6											

Monthly and Annual Precipitation for the Year 1946, with Departures from the Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
Eastern Division																										
Arvilla	0.30	.....	0.42	.....	0.75	.....	0.23	.....	1.86	.....	6.98	.....	0.58	.....	2.55	.....	3.87	.....	1.53	.....	0.47	.....	0.32	.....	19.86	.....
Carrington	0.15	-0.27	1.30	+0.82	0.54	-0.15	0.72	-0.61	1.97	-0.52	2.54	-0.91	0.87	-1.74	2.53	+0.46	3.27	+1.85	2.00	+0.97	0.05	-0.50	0.47	+0.06	16.41	-0.54
Casselton	0.23	-0.30	1.30	+0.71	0.86	+0.10	1.67	-0.08	2.94	+0.14	3.74	+0.15	0.96	-1.73	1.37	-1.17	3.96	+2.09	1.91	+0.56	1.50	+0.82	0.84	+0.32	21.31	+1.61
Cavalier	0.32	-0.35	0.12	-0.39	0.63	-0.13	0.57	-0.82	0.99	-1.27	3.02	+0.54	0.57	-2.07	1.32	-1.19	3.96	+1.64	2.12	+0.83	0.29	-0.45	0.32	-0.37	14.83	-4.03
Colgate	0.45	-0.03	0.56	+0.07	1.31	+0.51	0.98	-0.68	2.25	-0.45	4.06	+0.58	2.45	-0.08	1.36	-1.12	4.27	+2.44	2.00	+0.89	0.12	-0.55	0.78	+0.25	20.59	+1.83
Cooperstown	0.29	-0.22	0.61	+0.09	0.83	+0.12	0.53	-0.86	1.84	-0.69	3.28	+0.01	1.39	-1.20	2.18	-0.43	6.40	+4.64	1.50	+0.42	0.19	-0.45	0.65	+0.07	19.69	+1.50
Courtenay	0.09	-0.52	0.39	-0.19	0.73	-0.11	0.54	-0.89	1.75	-0.68	2.20	-1.00	0.99	-1.63	1.26	-1.14	5.02	+3.18	1.93	+0.78	0.08	-0.49	0.88	+0.21	15.85	-2.48
Devils Lake	0.29	-0.18	0.44	-0.06	1.32	+0.54	0.23	-1.29	0.92	-1.11	2.98	-0.58	1.60	-0.97	0.99	-1.49	3.04	+1.41	1.45	+0.20	0.20	-0.52	0.21	-0.33	13.67	-4.38
Edgeley	0.11	-0.38	1.18	+0.70	2.11	+1.25	0.84	-0.91	1.04	-1.52	3.21	+0.46	1.04	-1.53	1.44	-0.91	6.65	+4.99	3.32	+2.30	0.61	+0.09	0.34	-0.15	21.89	+3.50
Edmore	0.34	-0.15	0.28	-0.13	1.20	+0.51	0.57	-0.69	1.67	-0.19	5.05	+1.94	1.33	-1.51	1.45	-0.88	3.35	+1.50	2.07	+1.09	0.26	-0.30	0.17	-0.37	17.74	+0.76
Ellendale	0.16	-0.30	1.79	+1.30	1.84	+0.89	1.67	-0.19	1.11	-1.50	3.40	+0.01	3.54	+0.89	0.95	-1.78	4.44	+2.76	2.86	+1.80	1.33	+0.77	0.56	+0.10	23.69	+4.73
Fargo Airport	0.32	-0.35	1.44	+0.75	0.88	-0.13	1.10	-1.08	2.04	-0.85	4.03	-0.02	0.98	-2.45	1.76	-1.13	3.35	+1.13	2.12	+0.43	1.04	+0.14	0.66	-0.06	19.72	-3.62
Forman	0.07	-0.38	1.63	+1.13	2.02	+1.22	1.23	-0.78	0.78	-2.17	4.20	+0.60	5.46	+2.58	0.87	-1.88	3.33	+1.26	2.71	+1.36	1.20	+0.63	0.30	-0.06	24.00	+3.51
Fullerton	0.10	-0.60	1.85	+1.14	1.71	+0.65	2.34	+0.20	0.90	-2.09	3.24	-0.67	2.49	-0.39	1.09	-1.45	4.33	+2.37	3.13	+1.80	1.83	+1.12	0.69	-0.08	23.70	+2.06
Gackle	0.10	-0.34	0.63	+0.08	1.35	+0.60	1.70	-0.54	1.40	-1.18	4.28	+0.81	1.50	-1.18	1.06	-1.29	4.75	+3.17	1.86	+0.90	0.01	-0.53	0.17	-0.28	18.11	+0.22
Grafton	0.83	+0.33	0.37	-0.20	1.00	+0.30	0.43	-0.91	1.29	-0.73	3.80	+0.55	1.08	-1.68	3.21	+0.69	4.79	+2.63	2.27	+1.13	0.62	-0.07	0.61	+0.08	20.30	+2.12
Grand Forks	0.43	-0.10	0.73	+0.17	1.29	+0.51	0.43	-1.23	2.03	-0.47	4.60	+1.32	0.78	-2.00	4.90	+2.28	3.31	+1.39	1.62	+0.26	0.60	-0.19	0.45	-0.17	21.17	+1.77
Grand Forks Airport	0.70	.....	0.45	.....	0.89	.....	0.28	.....	1.68	-1.18	4.53	.....	0.64	.....	4.67	.....	3.13	.....	1.35	.....	0.57	.....	0.54	.....	19.43	.....
Hankinson	0.14	-0.33	1.19	+0.65	1.41	+0.59	1.33	-0.68	0.81	-2.05	2.81	-0.77	1.92	-0.95	0.62	-2.13	2.20	+0.10	2.13	+0.76	1.17	+0.52	0.80	+0.28	16.53	-4.01
Hannah	0.42	-0.28	0.45	-0.14	2.03	+1.31	0.57	-0.55	1.70	-0.41	1.84	-1.57	2.30	-0.13	1.70	-0.67	3.20	+1.09	3.03	+1.96	0.58	-0.11	0.12	-0.47	17.94	+0.03
Hillsboro	0.58	+0.07	1.17	+0.62	0.36	-0.40	1.05	-0.83	2.71	-0.24	4.74	+0.32	1.74	-0.90	1.38	-1.37	6.60	+4.53	1.80	+0.46	0.74	-0.02	0.63	-0.01	23.50	+3.23
Jamestown	0.18	-0.37	0.54	-0.05	0.72	-0.18	0.90	-0.80	1.37	-1.40	3.28	-0.22	2.57	-0.13	1.64	-0.91	5.56	+3.89	2.04	+0.75	0.05	-0.62	0.86	+0.21	19.71	+0.17
Jamestown Airport	0.57	.....	0.63	.....	0.89	.....	1.15	.....	1.47	.....	3.16	.....	2.84	.....	2.16	.....	5.77	.....	1.77	.....	0.12	.....	0.74	.....	21.27	.....
Kensal	0.14	.....	0.59	.....	0.98	.....	1.20	.....	1.53	.....	2.86	.....	1.24	.....	1.31	.....	3.77	.....	1.80	.....	0.05	.....	0.77	.....	15.74	.....
Langdon	0.69	+0.08	0.50	-0.13	1.33	+0.55	0.66	-0.57	0.97	-1.02	1.67	-1.57	2.03	-0.47	1.53	-0.94	3.27	+1.04	2.23	+1.20	0.66	-0.07	0.41	-0.22	15.95	-2.12
Larimore	T	-0.60	0.77	+0.22	0.48	-0.33	0.25	-1.35	1.56	-1.17	7.32	+3.76	0.16	-2.78	1.77	-0.94	2.96	+0.91	1.44	.....	0.26	-0.56	0.27	-0.29	17.24	-3.13
Lisbon	0.08	-0.51	1.77	+1.18	1.64	+0.91	2.56	+0.63	0.73	-2.04	3.75	-0.15	2.20	-0.70	1.21	-1.69	3.50	+1.50	2.58	+1.34	1.12	+0.49	0.75	+0.24	21.89	+1.20
Mayville	0.27	-0.12	0.80	+0.36	0.58	-0.11	0.81	-0.74	2.78	+0.06	4.77	+1.40	0.57	-2.14	2.93	+0.38	4.00	+1.94	1.50	+0.24	0.43	-0.28	0.73	+0.21	20.17	+1.20
McHenry	0.33	-0.09	0.44	-0.01	0.90	+0.21	0.68	-0.69	2.20	-0.11	3.96	-0.51	0.68	-1.94	3.09	+0.77	3.20	+1.77	1.79	+0.74	0.09	-0.45	0.49	0.00	17.03	-0.81
McLeod	0.06	-0.50	1.05	+0.49	1.01	+0.23	1.43	-0.56	1.16	-1.85	2.77	-1.06	4.12	+1.27	1.88	-0.82	4.13	+2.10	1.98	+0.60	0.79	+0.16	0.75	+0.29	21.31	+0.35
Oakes	0.10	-0.37	2.02	+1.56	1.74	+0.94	1.97	+0.10	1.08	-1.63	2.74	-0.90	3.18	+0.33	1.54	-1.13	3.00	+1.24	2.89	+1.58	1.58	+1.02	0.47	-0.03	22.13	+2.71
Park River	0.23	-0.26	0.19	-0.23	1.28	+0.62	0.65	-0.67	1.76	-0.18	3.39	+0.13	0.24	-2.37	1.80	-0.50	4.73	+2.58	2.31	+1.13	0.38	-0.25	0.11	-0.40	17.07	-0.40
Pembina	0.24	-0.39	0.22	-0.40	0.59	-0.21	0.71	-0.55	1.12	-1.07	4.80	+0.61	1.25	-1.16	0.77	-1.22	4.90	+2.72	1.51	+0.31	0.30	-0.45	0.29	-0.33	17.00	-1.14
Petersburg	0.12	-0.32	0.24	-0.26	0.36	-0.37	0.43	-0.96	1.69	-0.75	5.26	+2.32	0.29	-2.67	3.06	+0.70	4.25	+2.28	2.08	+0.91	0.14	-0.50	0.12	-0.36	18.60	+0.02
Sharon	0.38	-0.09	0.54	+0.06	0.97	+0.35	0.41	-1.07	1.90	-0.84	3.26	-0.35	1.54	-1.15	0.64	+3.67	4.63	+2.58	1.94	+0.65	0.27	-0.45	0.91	+0.43	22.79	+3.79
Valley City	0.27	-0.22	1.28	+0.69	1.18	+0.39	2.28	+0.55	2.95	+0.17	3.93	+0.38	1.21	-1.51	1.50	-1.04	5.52	+3.73	2.22	+0.90	0.42	-0.26	0.80	+0.22	23.56	+3.95
Wahpeton	0.08	-0.37	1.47	+1.00	1.05	+0.33	1.44	-0.64	0.82	-1.88	3.46	-0.12	2.71	-0.24	0.91	-1.96	1.92	-0.30	2.13	+0.69	0.94	+0.25	0.75	+0.25	17.68	-2.99
Middle Division																										
Ashley	0.13	-0.31	1.40	+0.95	1.68	+0.85	0.97	-0.64	1.68	-0.72	3.27	-0.15	2.96	+0.30	2.89	+0.45	4.17	+2.70	2.46	+1.40	0.31	-0.24	0.20	-0.30	22.12	+4.29
Belcourt	0.31	.....	0.42	.....	1.37	.....	0.41	.....	1.41	.....	3.26	.....	2.40	.....	1.00	.....	0.75	.....	1.77	.....	0.21	.....	0.10	.....	13.41	.....
Bisbee	0.83	+0.38	1.20	+0.84	1.45	+0.74	0.46	-0.73	0.67	-1.48	1.58	-1.78	1.52	-1.18	0.80	-1.55	1.44	-0.25	2.12	+1.13	0.33	-0.14	0.61	+0.18	13.01	-3.84
Bismarck	0.07	-0.31	0.42	+0.03	1.28	+0.41	1.13	-0.06	2.20	-0.03	3.02	-0.21	2.03	-0.25	1.00	-0.63	2.15	+0.71	2.25	+1.34	0.14	-0.34	0.54	+0.0		

Monthly and Annual Precipitation for the Year 1946, with Departures from the Normal—Continued

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
<i>Western Division—Con.</i>																										
Fryburg	0.26	-0.20	0.45	0.00	0.97	+0.16	0.54	-0.75	2.20	-0.15	2.20	-1.22	2.24	+0.02	1.81	.00	1.56	+0.22	3.65	+2.68	0.44	-0.04	1.45	+0.97	17.77	+1.69
Golva	0.13	-0.33	0.05	-0.35	0.35	-0.40	0.76	-0.42	2.01	-0.25	2.89	-0.70	3.17	+1.37	0.82	-0.78	1.11	-0.16	1.96	+1.06	0.24	-0.22	0.88	+0.41	14.37	-0.77
Grenora	0.03	-0.41	0.22	-0.23	0.01	-0.67	0.08	-0.95	1.16	-1.06	3.31	+0.35	3.01	+1.17	1.07	-0.43	1.39	+0.16	1.87	+1.08	0.52	-0.03	0.16	-0.36	12.83	-1.38
Halliday	0.07	.....	0.36	.....	0.25	.....	0.42	.....	1.64	.....	2.55	.....	2.09	.....	0.65	.....	1.63	.....	3.10	.....	0.27	.....	0.77	.....	13.80	.....
Hettinger	0.01	-0.35	0.09	-0.34	1.58	+0.92	0.75	-0.31	3.51	+1.23	2.32	-0.84	2.14	-0.14	1.29	-0.25	2.47	+1.17	3.39	+2.68	0.27	-0.13	0.63	+0.26	18.45	+3.90
Kenmare	0.24	-0.11	0.85	+0.46	0.38	-0.27	0.12	-0.80	0.62	-1.36	1.38	-1.51	3.86	+1.56	0.52	-1.39	0.87	-0.70	2.42	+1.46	0.76	+0.22	0.64	+0.21	12.66	-2.23
Marmarth	0.18	-0.24	0.30	-0.11	1.07	+0.34	0.95	-0.12	2.99	+0.70	3.46	+0.33	2.41	+0.50	0.97	-0.65	1.59	+0.33	4.04	+3.25	0.33	-0.04	0.97	+0.57	19.26	+4.86
Medora	0.04	-0.50	0.52	+0.13	0.77	+0.01	0.11	-1.04	2.27	+0.09	1.94	-1.48	1.32	-0.57	0.41	-1.11	1.55	+0.23	2.35	+1.57	0.27	-0.21	1.63	+1.15	13.18	-1.73
Mott	T.	-0.49	0.20	-0.28	2.16	+1.30	0.50	-0.72	1.78	-0.48	3.77	+0.52	1.32	-0.81	0.99	-0.77	1.57	+0.20	1.60	+0.77	0.12	-0.34	0.77	+0.29	14.78	-0.81
New England	0.05	-0.41	0.39	-0.10	1.65	+0.84	0.98	-0.22	2.46	+0.29	3.36	+0.20	1.27	-0.86	2.14	+0.56	1.46	+0.09	3.50	+2.71	0.29	-0.16	1.29	+0.89	18.84	+3.83
New Hradec	0.04	.....	0.30	.....	0.39	.....	0.73	.....	1.66	.....	3.54	.....	2.58	.....	0.97	.....	0.79	.....	3.78	.....	0.13	.....	1.10	.....	16.01	.....
Parshall	0.10	-0.24	0.47	+0.08	0.25	-0.33	0.34	-0.73	1.86	-0.31	1.76	-1.73	2.48	+0.26	1.72	-0.12	0.96	-0.53	2.09	+1.34	0.22	-0.17	0.62	+0.21	12.87	-2.27
Portal	0.37	-0.03	0.88	+0.50	0.39	-0.22	0.37	-0.57	0.99	-1.08	2.97	-0.12	2.42	+0.35	1.51	-0.45	1.47	+0.01	1.43	+0.59	0.78	+0.26	0.41	-0.04	13.99	-0.80
Powers Lake	0.04	-0.48	1.25	+0.80	0.15	-0.55	0.26	-0.88	0.96	-1.19	1.84	-1.45	2.82	+0.55	1.10	-0.58	0.85	-0.44	0.92	-0.13	0.33	-0.16	0.38	-0.16	10.90	-4.67
Richardton	0.02	-0.36	0.19	-0.22	1.64	+0.92	1.28	+0.06	2.59	+0.13	3.51	+0.04	2.80	+0.34	1.38	-0.46	1.56	+0.24	3.57	+2.78	0.27	-0.25	1.38	+0.96	20.19	+4.18
Ryder	T.	-0.48	0.31	-0.14	0.39	-0.19	0.22	-0.90	1.94	-0.01	2.65	-0.72	3.11	+1.09	2.01	+0.41	0.75	-0.59	2.23	+1.46	0.18	-0.35	0.61	+0.16	14.40	-0.26
Sanish	T.	.....	1.07	.....	0.09	.....	0.40	.....	2.10	.....	2.29	.....	2.75	.....	2.21	.....	0.81	.....	1.64	.....	0.21	.....	0.78	.....	14.35	.....
Stanley	0.20	-0.16	0.49	+0.07	0.13	-0.49	0.20	-0.95	1.14	-0.85	2.18	-0.87	2.28	+0.23	1.49	-0.29	0.39	-1.01	1.46	+0.68	0.19	-0.34	0.47	+0.05	10.62	-3.93
Tagus	T.	.....	0.57	+0.20	T.	.....	0.63	.....	1.32	-0.74	2.34	-0.72	3.02	+0.99	1.75	.....	0.70	-0.58	1.52	+0.71	0.25	-0.21	0.40	-0.04	11.87	-2.43
Tioga	0.32	-0.11	0.53	+0.15	0.44	-0.33	0.69	-0.36	1.46	-0.77	1.63	-1.70	3.30	+1.54	0.64	-0.90	2.32	+1.09	1.61	+0.81	0.69	+0.24	1.67	+1.27	15.30	+0.93
Trotters	0.19	.....	0.48	.....	0.20	.....	0.16	.....	1.45	.....	1.91	.....	2.81	.....	1.51	.....	0.99	.....	2.01	.....	0.21	.....	0.53	.....	12.45	.....
Van Hook	0.19	-0.28	0.89	+0.46	0.06	-0.63	0.56	-0.61	1.73	-0.26	4.25	+1.10	3.78	+1.78	1.01	-0.59	1.74	+0.43	2.80	+1.93	0.28	-0.21	0.89	+0.36	18.18	+3.48
Watford City	0.05	-0.44	0.32	-0.14	T.	-0.62	0.37	-0.59	1.35	-0.55	2.93	-0.17	2.56	+0.58	1.55	-0.26	1.63	+0.44	1.49	+0.69	0.56	+0.06	0.39	-0.13	13.20	-1.13
Wildrose	0.15	-0.39	0.52	+0.11	0.08	-0.61	0.35	-0.85	1.53	-0.53	2.55	-0.88	4.32	+2.43	1.13	-0.34	1.33	+0.24	1.63	+0.77	0.45	-0.13	0.59	+0.01	14.63	-0.17
Williston	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

The departures from normal precipitation for stations with 15 years or more of record are computed from a normal or "standard mean," adjusted to a uniform 45-year period; for stations of 10 to 14 years, the means for the period of record are used.

T. Precipitation 0.005 inch or less.

CHART SHOWING METEOROLOGICAL STATIONS



○ Section Center

● Weather Bureau Office

○ Substation

□ Hydroclimatic Substation

[WBO, Minneapolis, 5-6-47-1500]

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THE CLIMATE OF THE

JAN 22 1947

UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.97	2	29.14	13	12.8	54	nw.	14	81	84	72	77	54	1449
Devils Lake....	30.94	2	28.93	14	10.3	28	w.	14	...	79	74	78	51	1597
Fargo.....	30.95	3	29.02	14	14.8	49	w.	14	83	84	79	83	52	1518
Williston.....	30.91	2	29.27	13	8.8	33	w.	26	84	85	78	80	43	1441

† And other dates.

COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	3.3	58	-52	0.31	0.41	0.25	0.32	2.8	4	15	8	8
1893...	0.8	52	-43	0.93	0.94	1.11	0.99	8.4	7	11	11	9
1894...	0.6	60	-47	0.33	0.40	0.38	0.39	3.6	4	13	9	9
1895...	-2.9	42	-46	0.53	0.69	0.47	0.56	5.5	5	16	8	7
1896...	5.3	58	-42	0.75	0.77	0.80	0.77	6.6	6	9	9	13
1897...	3.6	49	-38	0.91	0.64	0.76	0.77	7.5	5	11	9	11
1898...	14.6	69	-32	0.14	0.12	0.07	0.11	1.1	2	15	8	8
1899...	5.2	55	-41	0.29	0.20	0.26	0.25	2.4	3	13	9	9
1900...	15.4	70	-30	0.27	0.27	0.12	0.22	2.0	4	15	9	9
1901...	7.7	68	-39	0.29	0.29	0.26	0.28	3.0	4	14	8	9
1902...	12.7	51	-40	0.17	0.03	0.23	0.14	1.4	2	17	7	7
1903...	9.4	56	-37	0.72	0.58	0.68	0.66	6.7	5	13	8	10
1904...	3.6	50	-52	0.41	0.36	0.42	0.40	4.0	3	15	6	10
1905...	0.9	48	-40	0.26	0.30	0.41	0.32	2.9	3	15	8	8
1906...	12.2	60	-38	0.75	0.72	0.61	0.69	6.9	4	14	6	11
1907...	-6.2	45	-45	1.77	1.13	1.05	1.32	14.5	5	12	8	11
1908...	17.0	70	-41	0.21	0.16	0.34	0.24	1.9	2	17	8	6
1909...	3.5	53	-48	0.60	0.32	0.37	0.43	4.3	4	14	8	9
1910...	9.4	49	-35	0.30	0.21	0.59	0.37	4.1	3	16	8	7
1911...	-1.0	56	-43	0.86	0.96	0.69	0.84	8.5	6	11	8	12
1912...	-4.6	63	-52	0.34	0.34	0.36	0.35	3.6	4	16	6	9
1913...	3.2	60	-54	0.51	0.40	0.43	0.45	4.6	5	12	9	10
1914...	14.8	62	-38	0.56	0.48	0.40	0.48	4.9	4	12	8	11
1915...	5.8	51	-48	0.39	0.24	0.25	0.29	3.4	3	12	9	10
1916...	-6.4	49	-56	1.58	1.24	1.26	1.36	15.1	6	13	8	10
1917...	1.7	47	-46	0.82	0.69	0.65	0.72	8.6	5	13	8	10
1918...	0.5	48	-44	0.41	0.43	0.58	0.47	5.0	5	12	8	11
1919...	18.7	66	-44	0.24	0.21	0.10	0.18	1.7	2	17	8	6
1920...	2.7	49	-44	1.26	0.96	0.68	0.97	10.0	5	10	9	12
1921...	15.9	52	-31	0.29	0.20	0.22	0.24	2.5	2	13	9	9
1922...	7.0	55	-46	0.68	0.36	0.42	0.49	5.2	5	12	9	10
1923...	10.1	56	-35	0.59	0.43	0.54	0.52	6.0	5	9	9	13
1924...	2.6	61	-42	0.30	0.20	0.18	0.23	2.5	3	14	9	8
1925...	8.6	52	-35	0.33	0.18	0.22	0.24	2.5	3	11	10	10
1926...	16.3	55	-30	0.31	0.34	0.49	0.38	4.1	4	13	8	10
1927...	10.1	60	-44	0.50	0.36	0.41	0.42	4.3	4	14	8	9
1928...	13.0	50	-41	0.21	0.19	0.19	0.20	2.3	3	14	9	8
1929...	-4.8	42	-42	0.76	0.48	0.63	0.62	9.2	6	13	8	10
1930...	-1.9	41	-43	0.26	0.22	0.40	0.29	2.7	4	12	9	10
1931...	21.4	68	-31	0.15	0.15	0.14	0.15	1.4	2	15	8	8
1932...	9.5	50	-34	0.47	0.62	0.59	0.56	6.3	4	12	7	12
1933...	11.8	53	-30	0.92	0.70	0.79	0.80	10.0	7	12	7	12
1934...	15.8	54	-36	0.29	0.14	0.17	0.20	2.0	3	11	9	11
1935...	3.3	60	-44	0.55	0.29	0.39	0.41	4.9	6	8	10	13
1936...	-5.8	43	-44	0.51	0.48	0.69	0.56	6.9	7	11	8	12
1937...	-8.3	38	-44	1.04	0.55	0.42	0.67	9.0	6	13	8	10
1938...	9.5	50	-40	0.36	0.42	0.67	0.48	6.1	6	10	9	12
1939...	15.0	55	-32	0.56	0.32	0.54	0.47	6.0	6	8	10	13
1940...	3.4	48	-39	0.10	0.11	0.10	0.10	1.4	3	13	9	9
1941...	11.0	53	-33	0.80	0.56	0.25	0.54	6.3	5	10	7	14
1942...	18.3	60	-35	0.09	0.08	0.10	0.09	1.0	2	16	7	8
1943...	-1.4	45	-44	0.42	0.74	1.02	0.73	9.4	7	10	8	13
1944...	21.8	61	-26	0.28	0.33	0.51	0.37	4.8	3	16	8	7
1945...	12.7	51	-31	0.40	0.37	0.45	0.41	5.6	5	8	8	15
1946...	11.2	56	-33	0.27	0.23	0.10	0.20	2.9	4	10	11	10
1947...	16.0	57	-37	0.31	0.40	0.33	0.35	4.4	4	8	11	12
Period	7.0	70	-56	0.51	0.43	0.46	0.47	5.1	4	13	8	10

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GENERAL SUMMARY

The temperature for the month averaged 9.0° above the January normal. There were only a few days with readings below normal but the 2d and 3d were the coldest days since February 1944. During the 4th week the warm weather in the southwestern part of the state melted the snow and there was a heavy run of water in the smaller streams in that section. Precipitation was below normal except over the northern counties where heavy snowfalls occurred. Greatest amounts fell in the north-central counties. Sunshine averaged near the normal. Unusually high winds occurred in all parts of the state on several days. During the blizzard on the 13-14th the January records for high winds were exceeded at both Bismarck and Fargo. The average hourly velocity for the entire day at Bismarck for the 14th was 34.2 miles per hour. Livestock continue in fair to good condition.

TEMPERATURE

The mean temperature for the state was 16.0°, or 9.0° above the 1892-1947 average for January. The mean temperature for the eastern division was 15.0°; for the middle division, 15.5°; and for the western division, 17.4°. The highest mean temperature was 22.4° at Linton, and the lowest, 8.2° at Bottineau, making a range in mean temperature of 14.2°. The absolute range was 94°, from 57° at Oakes on the 26th, to -37° at Willow City on the 3d. The average daily excess in temperature for the state since January 1, 1947, is 9.0°.

PRECIPITATION

The average precipitation for the state was 0.35 inch, or 0.12 inch less than the 1892-1947 average for January. In the eastern division the average amount was 0.31 inch; in the middle division, 0.40 inch; and in the western division, 0.33 inch. The greatest monthly amount reported was 0.82 inch at Upham; the least was 0.05 inch at Mott. The greatest amount recorded in any 24 consecutive hours was 0.62 inch at Grand Forks Airport on the 13-14th. The accumulated deficiency in precipitation for the state since January 1, 1947, is 0.12 inch. The average snowfall was 4.4 inches.

Climatological Data for January 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	13.8		44	26	-30	3	0.43		0.33	14	5.2	4	23	4	4	nw.	Albert Thoren.
Carrington	Foster	1,579	50	14.2	+7.5	46	26	-22	3	0.34	-0.08	0.19	15	4.2	2	12	4	15	.....	Soo Line Agent.
Casselton	Cass	934	52	17.7	+12.7	50	26	-29	3	0.30	-0.23	0.14	13-14	4.6	7	12	14	5	s.	Joseph L. Farrell.
Cavalier	Pembina	894	40	11.0	+9.6	44	23	-21	3	0.40	-0.27	0.40	14	6.0	1	5	18	8	nw.	City Light & Power Co.
Colgate	Steele	1,180	14							0.42	-0.06	0.42	13-14	4.2	1	17	11	3	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	51	15.0	+10.7	43	26	-30	3	0.61	+0.10	0.61	14	7.0	1	13	3	15	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	17							0.52	-0.09	0.42	14	6.2	3	12	12	7	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	13.6	+11.8	38	26	-24	2	0.44	-0.03	0.30	13-14	5.7	8	6	8	17	w.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	47	18.0	+9.2	50	26	-25	3	0.24	-0.25	0.11	28-29	3.7	6	7	15	9	w.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	10.4	+10.2	36	26	-29	2 1/2	0.22	-0.27	0.16	14	2.9	4	9	7	15	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	19.2	+9.2	55	26	-22	3	0.27	-0.19	0.10	31	3.3	5	9	8	14	w.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	16.1	+12.3	46	26	-26	3	0.32	-0.35	0.19	13-14	2.7	8	4	11	16	s.	U. S. Weather Bureau.
Foran	Sargent	1,249	56	20.0	+12.9	48	23 1/2	-24	3	0.20	-0.25	0.12	25	1.0	2	14	9	8	sw.	Art Waterman.
Fullerton	Dickey	1,439	50	21.0	+11.9	53	26	-22	3	0.15	-0.55	0.07	28	1.5	3	8	15	8	nw.	F. O. Alin.
Gackle	Logan	1,951	17	17.0	+9.3	48	26	-27	3	0.14	-0.30	0.12	14	1.8	2	7	18	6	w.	Tony Martin.
Grafton	Walsh	827	56	14.2	+11.6	40	26	-21	3	0.45	-0.05	0.35	14	5.7	3	8	10	13	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	12.6	+9.0	40	26	-22	3	0.51	-0.02	0.43	13-14	6.3	3	6	16	9	nw.	University of N. Dak.
Grand Forks Airt., 2 1/2 mi. W	Grand Forks	834	7	11.5		39	6 1/2	-23	3	0.74		0.62	13-14	8.0	6	5	9	17	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	18.4	+10.5	54	26	-21	3	0.15	-0.32	0.07	15	2.0	3	10	10	11	w.	Soo Line Agent.
Hannah	Cavalier	1,568	54	9.0	+10.2	38	26	-26	2	0.27	-0.43	0.12	14	3.8	3	5	21	6	nw.	A. S. Prior.
Hillsboro	Trall	901	42	16.4	+11.5	47	26	-26	3	0.22	-0.29	0.20	13-14	3.3	2	5	19	7	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	18.4	+11.3	48	26	-25	3	0.16	-0.39	0.12	14	2.3	2	9	14	8	w.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	7	16.1		48	26	-29	3	0.41		0.17	13-14	4.1	6	5	8	18	w.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	15.8		48	26	-27	3	0.24		0.12	13	2.5	4	11	9	11	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	9.9	+10.3	38	26	-25	2 1/2	0.63	+0.02	0.38	13-14	5.7	9	8	12	11	w.	U. S. Wildlife Refuge.
Larimore	Grand Forks	1,134	55	14.8	+11.0	44	26	-22	3	0.21	-0.39	0.21	14	2.5	1	8	10	13	sw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	20.4	+12.8	54	26	-24	3	0.15	-0.44	0.07	14	1.9	3	9	6	16	nw.	J. O. Halverson.
Mayville	Trall	975	52	16.0	+10.0	43	26	-24	3	0.09	-0.30	0.07	13-14	1.2	3	8	15	8	w.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	25	13.2	+11.7	41	26	-29	3	0.25	-0.17	0.20	13-14	2.0	3	7	13	11	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	36	19.0	+10.7	53	26	-25	3	0.07	-0.49	0.07	14	1.0	1	9	15	7	sw.	J. G. Carlson.
Oakes	Dickey	1,318	19	17.6	+8.7	57	26	-22	3 1/2	0.19	-0.28	0.11	14	2.5	2	16	6	6	nw.	C. M. Hagen.
Park River	Walsh	998	44	12.6	+9.7	39	23	-22	2	0.28	-0.21	0.28	13-14	4.0	1	13	7	11	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	9.0	+11.4	38	19 1/2	-27	3	0.28	-0.35	0.19	13-14	5.5	6	2	11	18	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	12.0		37	23	-25	3	0.41	-0.03	0.38	14	5.0	2	10	17	4	nw.	T. C. Overland.
Sharon	Steele	1,516	24	13.4	+9.9	41	26	-27	3	0.30	-0.17	0.27	13-14	4.8	3	10	7	14	sw.	Hugh Lyon.
Valley City	Barnes	1,229	43	18.6	+12.5	47	26	-31	3	0.51	-0.03	0.48	13-14	6.5	2	15	6	10	nw	Miss J. C. Robertson.
Wahpeton	Richland	962	56	19.4	+10.7	52	26	-24	3	0.07	-0.38	0.07	13-14	1.5	1	14	11	6	nw.	State School of Science.
Average for Eastern Division				15.0	+10.1	67	26	-31	3	0.31	-0.20	0.62	13-14	3.8	3	9	11	11	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	17.2	+8.5	46	24	-24	3	0.21	-0.23	0.14	14	2.9	3	14	7	10	nw.	Eddie H. Glur.
Belcourt	Rosette	1,960	3	10.6		45	23	-33	3	0.40		0.23	14	4.7	8	6	16	9	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	11.6	+9.8	40	25	-26	2	0.37	-0.08	0.22	14	4.3	5	9	11	11	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	19.4	+11.4	52	26	-30	3	0.27	-0.11	0.14	13-14	3.8	3	6	2	23	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	8	18.3	+12.0	51	26	-30	3	0.45	0.00	0.21	13-14	5.1	8	6	2	23	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	8.2	+6.8	39	26	-32	2	0.68	+0.27	0.30	14	9.2	4	10	6	15	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	17.4	+9.5	43	26	-32	3	0.80	+0.44	0.60	13-14	8.4	2	8	5	18	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	36	19.4	+9.3	49	26	-22	3	0.38	+0.02	0.18	28-29	4.1	6	5	13	13	nw.	J. W. Evans.
Center	Oliver	2,100	10	17.0		46	26	-31	3	0.34		0.30	14	5.0	3	5	18	8	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	12.6	+7.1	43	26	-27	2 1/2	0.38	-0.01	0.20	14	4.6	6	7	7	17	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rosette	1,682	52	12.2	+9.4	46	26	-29	3	0.33	-0.10	0.14	14	4.6	3	5	17	9	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	42	10.6	+7.5	45	26	-32	3	0.79	+0.43	0.40	13-14	7.1	8	7	17	7	w.	E. R. Sherman.
Fessenden	Wells	1,610	36	15.2	+10.5	44	26	-24	3	0.37	-0.12	0.11	14	5.2	6	15	12	4	nw.	John V. Zuber.
Fort Yates	Sioux	1,670	48	21.5	+11.9	55	26	-29	3	0.17	-0.22	0.17	28	2.0	1	13	6	12	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	27	15.9	+9.1	43	25 1/2	-23	2 1/2	0.29	-0.15	0.16	13-14	4.7	6	2	10	19	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	16.5	+8.6	47	26	-23	3	0.51	+0.14	0.30	13-14	6.9	7	5	9	17	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	41	15.8	+10.7	45	26	-26	2	0.63	+0.25	0.40	13-14	7.4	6	18	7	16	nw.	Fred Roble.
Hansboro	Towner	1,597	40	10.6	+10.0	40	23	-26	2	0.25	-0.36	0.15	13	3.1	4	3	14	14	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45							0.28	-0.20	0.23	13-14	3.0	2	8	12	11	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	13.6		44	25	-28	2	0.54		0.38	14	7.0	3	10	13	8	w.	John Dulmage.
Linton	Emmons	1,711	31	21.2	+11.9	55	26	-30	3	0.31	-0.03	0.10	14	3.5	7	9	4	18	nw.	Wm. Heveman.
Maddock, 1 mile E	Benson	1,604	33	14.4	+9.8	42	26	-29	3	0.54	+0.12	0.26	14	6.1	5	10	12	9	nw.	Benson Cy. A. & T. Sch.
Maudan, 1 1/2 miles SW	Morton	1,750	34	18.4	+9.8	50	26	-28	3	0.52	-0.15	0.1								

Climatological Data for January 1947—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Epping.....	Williams	2,224	39	15.6	+10.4	42	25	-26	2	0.21	-0.21	0.16	14	3.9	3	12	6	13	nw.	T. Beachler.
Fairfield, 9½ miles N.....	Billings	2,650	19	.....	.....	.....	.....	.....	.....	0.15	-0.29	0.07	13-14	1.3	3	9	8	14	sw.	Mrs. Edith Larson.
Fryburg, 2 miles N.....	Billings	2,790	30	19.8	.....	46	26	-20	2†	0.36	-0.10	0.09	13†	4.4	8	9	9	13	nw.	Verne King.
Golva, 1 mile E.....	Golden Valley	2,781	7	21.3	+9.2	44	24†	-27	3	0.27	-0.19	0.10	13	3.4	7	7	11	13	nw.	Chester K. Puda.
Grenora.....	Williams	2,114	39	15.6	+10.7	41	25	-31	31	0.25	-0.19	0.15	13-14	6.7	4	19	10	2	nw.	L. D. Nielson.
Halliday.....	Dunn	2,073	6	.....	.....	.....	.....	.....	.....	0.13	.....	0.05	13	2.6	3	4	16	11	nw.	John Kisse.
Hettinger.....	Adams	2,675	41	20.2	+6.5	52	26	-25	3	0.51	+0.15	0.30	12	8.0	3	14	10	7	nw.	Edgar Martin.
Kenmare.....	Ward	1,799	16	14.2	+8.4	43	26	-22	2†	0.63	+0.28	0.29	13-14	8.3	11	11	8	12	nw.	Theo. E. Eckberg.
Marmarth.....	Slope	2,714	89	21.3	+7.8	45	23†	-27	3	0.36	-0.06	0.10	13	4.6	7	7	11	13	nw.	S. P. Grane.
Nadota, 14 mi. W.....	Billings	2,711	33	19.4	.....	47	23	-28	3	0.21	-0.33	0.08	1	3.0	8	15	7	9	sw.	Harry Roberts.
Mott.....	Hettinger	2,424	41	19.8	+9.6	49	26	-27	3	0.05	-0.44	0.03	28	0.6	2	14	5	12	nw.	Northern Pacific Agent.
New England.....	Hettinger	2,621	56	21.8	+8.3	46	26	-28	3	0.45	-0.01	0.12	13-14†	5.5	8	6	13	12	nw.	Alfred Hasel.
New Hradec, 1 mile E.....	Dunn	.....	6	17.9	.....	41	25†	-29	3	0.35	.....	0.12	13-14	3.3	9	6	16	9	sw.	Peter F. Fieck.
Parshall.....	Mountrail	1,929	33	15.8	+9.5	45	26	-30	3	0.46	+0.12	0.17	13	5.7	9	2	24	5	nw.	C. E. Shubert.
Portal.....	Burke	1,954	34	9.2	+6.2	39	24	-29	2	0.61	+0.21	0.50	13-14	9.0	3	4	18	9	sw.	U. S. Customs Service.
Powers Lake.....	Burke	2,205	43	15.8	+7.7	42	26	-25	2	0.20	-0.32	0.20	12-13	2.4	1	9	11	11	w.	E. J. Lewis.
Richardton, 14 miles N.....	Stark	2,467	32	19.4	+8.3	46	26	-21	3	0.43	+0.05	0.17	13-14	5.9	6	10	11	10	sw.	Assumption Abbey.
Ryder.....	Ward	2,108	19	.....	.....	.....	.....	.....	.....	0.27	-0.06	0.17	14	4.1	6	5	4	22	sw.	S. C. Schellenbaum.
Sanish.....	Mountrail	1,835	22	15.6	+10.5	47	26	-30	3†	0.47	-0.01	0.40	13-14	6.1	3	0	15	16	.....	H. J. Bugge.
Stanley.....	Mountrail	2,158	10	11.7	.....	42	24	-27	2	0.83	.....	0.33	13-14	10.0	3	19	5	7	nw.	Leroy Edwards.
Tagus.....	Mountrail	2,179	19	.....	.....	.....	.....	.....	.....	0.34	-0.02	0.14	13-14	3.3	10	7	13	11	w.	Geo. N. Pilgard.
Tioga.....	Williams	2,279	19	.....	.....	.....	.....	.....	.....	0.29	-0.14	0.15	14	4.7	3	5	13	13	sw.	L. A. Simon.
Trotters.....	Golden Valley	.....	22	.....	.....	.....	.....	.....	.....	0.44	+0.01	0.31	13-14	6.0	8	1	22	8	sw.	Walter Grunewald.
Van Hook.....	Mountrail	1,864	7	17.6	.....	46	26	-27	3	0.34	.....	0.34	13-14	4.4	2	8	9	14	nw.	H. Glenn Sims.
Watford City.....	McKenzie	2,084	35	18.4	+8.6	47	26	-24	2	0.48	+0.01	0.22	14	5.2	6	4	21	6	.....	J. C. Zeller.
Wildrose.....	Williams	2,258	18	.....	.....	.....	.....	.....	.....	0.21	-0.28	0.12	20	2.9	3	7	15	9	nw.	Jonathan Winkler.
Williston.....	Williams	1,878	69	18.5	+12.1	43	26	-22	31	0.36	-0.18	0.30	13-14	3.9	5	3	6	22	w.	U. S. Weather Bureau.
Average for Western Division.....				17.4	+8.1	52	26	-31	31	0.31	-0.13	0.50	13-14	4.4	5	8	11	12	nw.	
Average for the State.....				16.0	+9.0	57	26	-37	8	0.35	-0.12	0.62	13-14	4.4	4	8	11	12	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

4 Best available used for stations not equipped with recorders.

Daily Temperatures for January 1947

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum...	15	-10	13	35	32	37	39	33	41	43	21	37	32	12	15	33	38	40	38	19	13	33	44	46	44	40	38	16	16	22	14	28.4	
	Minimum...	-8	-14	-24	-22	6	12	18	18	12	13	12	14	18	2	-8	-6	12	14	24	9	-11	-11	12	24	19	15	19	10	10	-4	-3	5.9	
Bismarck Airport	Maximum...	22	-4	15	33	29	36	36	36	39	41	34	24	32	5	9	36	41	43	40	19	14	41	44	45	41	51	34	18	22	17	12	29.4	
	Minimum...	-4	-24	30	11	3	21	15	20	12	19	13	16	5	2	-11	9	12	9	12	-8	-11	7	28	24	32	27	17	13	5	0	-18	7.2	
Bottineau/	Maximum...	0	-10	20	20	34	33	30	21	29	32	14	20	30	7	0	26	18	33	16	-14	12	27	34	38	36	39	13	10	17	12	9	19.5	
	Minimum...	-12	-32	-32	-17	3	10	5	5	8	14	7	-3	12	4	-11	-19	-3	1	3	-16	-29	-23	6	9	10	15	4	2	1	3	-2	-3.6	
Carson	Maximum...	18	0	14	37	30	36	35	35	39	42	38	25	28	10	3	35	39	40	39	22	15	40	45	44	44	49	36	25	20	22	12	29.6	
	Minimum...	-5	-18	-22	9	6	23	17	24	15	22	15	15	8	3	-15	-2	23	24	21	-8	-13	8	31	25	30	30	15	15	13	0	-17	9.2	
Crosby/	Maximum...	6	-7	17	37	34	31	34	31	32	38	20	26	19	-5	11	30	36	20	-12	18	35	36	38	34	39	38	18	14	20	10	-8	21.6	
	Minimum...	-10	-26	-25	-17	4	12	15	21	14	15	8	7	18	-6	-17	-18	11	3	20	-14	-20	-15	9	15	14	26	5	-2	-7	-4	-13	0.7	
Devils Lake	Maximum...	16	-10	15	35	27	34	31	28	35	36	23	18	31	27	2	30	29	33	17	14	6	27	36	37	38	38	22	11	22	20	13	24.5	
	Minimum...	-12	-24	-23	12	0	15	10	9	14	20	8	6	17	1	-9	0	0	1	12	16	-18	-1	18	15	26	21	7	-3	3	-1	-19	2.6	
Dickinson Airport	Maximum...	16	-4	17	33	32	32	33	32	37	39	31	25	23	-1	15	33	38	38	37	16	20	38	41	40	39	44	31	20	19	17	9	27.1	
	Minimum...	-12	-18	-18	16	11	19	21	17	19	28	19	19	1	-8	-11	14	20	26	9	-8	11	32	30	29	21	14	11	11	2	-21	9.5		
Dunn Center/	Maximum...	20	5	18	37	33	36	36	34	37	42	30	24	26	20	25	33	40	39	30	19	19	40	46	40	41	47	33	27	11	16	10	29.8	
	Minimum...	5	-22	-28	-2	7	12	19	22	15	16	15	15	20	0	-10	2	11	17	10	-9	-10	11	27	26	29	32	12	8	10	0	-20	7.7	
Fargo Airport	Maximum...	18	0	7	35	29	36	32	29	31	37	31	21	35	34	3	32	26	33	36	15	7	31	39	38	39	46	34	22	26	14	17	26.9	
	Minimum...	0	-20	-26	7	2	10	14	6	10	18	1	5	21	2	-6	-5	3	1	14	-10	-14	2	18	26	31	30	11	2	10	1	5.3		
Fessenden	Maximum...	14	-4	9	36	33	35	33	28	35	37	27	31	31	30	0	31	30	39	38	16	6	35	37	40	36	44	39	21	21	16	12	27.0	
	Minimum...	-6	-23	-24	7	0	11	10	9	11	16	3	7	16	-8	-13	-11	8	5	14	-14	-19	-5	21	23	29	29	12	2	6	-5	-9	3.3	
Fullerton	Maximum...	21	17	10	38	35	38	37	36	41	42	35	22	31	16	10	41	42	46	43	-28	13	39	47	45	44	53	42	26	24	19	16	32.2	
	Minimum...	10	-15	-22	-8	7	10	16	17	15	22	16	11	15	4	-4	8	22	7	20	-5	-10	4	27	29	35	29	20	8	14	-2	1	9.7	
Garrison	Maximum...	20	-4	13	36	32	34	34	33	35	38	33	23	29	3	5	34	34	39	36	16	11	36	40	39	40	47	30	17	21	22	9	26.9	
	Minimum...	-7	-20	-23	10	2	18	15	17	15	17	11	14	3	-3	-11	4	9	6	12	-12	-15	4	27	25	31	23	15	8	10	4	-21	6.1	
Golva	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grafton	Maximum...	16	3	9	37	35	37	36	28	29	34	37	21	31	32	15	27	31	15	38	21	3	21	38	38	38	40	34	18	17	12	13	25.9	
	Minimum...	0	-20	-21	5	1	7	10	8	11	20	1	-2	15	15	-6	-12	2	-5	12	-11	-15	-8	9	16	25	22	13	-9	4	-3	3	2.5	
Grand Forks Airport	Maximum...	17	-5	11	33	18	39	29	26	30	36	16	19	32	33	5	28	26	25	36	10	5	23	36	35	36	39	29	7	18	13	14	23.2	
	Minimum...	-5	-20	-23	3	1	11	10	3	9	16	-2	2	18	2	-15	-9	-8	-8	4	-15	-18	-10	8	11	20	21	0	-8	8	2	-4	-2	-0.2
Jamestown Airport	Maximum...	20	-1	13	35	28	37	35	30	38	37	28	20	32	10	-1	32	35	39	38	14	9	35	40	41	40	48	31	18	28	17	12	26.9	
	Minimum...	-4	-23	-29	11	4	17	13	12	10	16	10	10	11	-1	-12	-1	5	5	14	-12	-15	3	26	25	30	28	15	5	1	-14	5.3		
Kenmare/	Maximum...	0	3	22	38	34	33	34	30	37	40	17	24	23	1	16	31	25	37	27	-10	17	35	39	42	42	43	25	10	18	15	7	24.3	
	Minimum...	-5	-22	-22	-8	6	10	10	19	18	21	8	9	15	-3	-14	-14	14	6	23	-12	-16	-12	15	23	22	29	9	-4	-4	7	9	3	4.2
Langdon	Maximum...	12	3	10	32	29	34	27	25	30	30	29	15	27	26	1	21	23	13	32	13	0	18	35	35	36	38	25	8	13	13	9	21.2	
	Minimum...	-3	-25	-25	4	7	8	2	8	5	17	-7	6	11	1	-6	-14	-2	9	10	-15	-22	-12	12	13	25	16	8	-12	-9	-6	-3	-1.4	
Marmarth	Maximum...	20	0	20	35	35	34	36	36	42	44	38	35	32	3	12	37	39	40	39	20	30	41	45	45	40	45	35	27	22	13	31.2		
	Minimum...	-10	-23	-27	13	10	28	28	30	22	26	30	25	3	-5	-15	10	20	29	15	-2	-2	3	28	30	30	30	15	15	17	-2	-17	11.4	
Minot Airport	Maximum...	20	-5	18	37	33	33	34	30	34	38	20	24	26	8	11	31	30	38	37	14	10	34	37	44	39	43	24	11	19	17	10	25.8	
	Minimum...	-15	-23	-16	14	4	17	15	19	16	20	8	12	8	-6	-11	7	7	5	13	-14	-16	4	30	23	30	20	9	4	9	5	-23	5.6	
Mott	Maximum...	20	2	15	32	35	35	36	35	41	42	39	25	25	10	12	36	42	44	37	29	19	41	45	44	44	49	37	24	21	20	16	30.7	
	Minimum...	-7	-19	-27	10	7	25	18	27	11	20	18	19	10	-3	-11	1	18	22	29	-3	-11	4	20	27	30	33	18	9	9	-10	-14	9.0	
Pembina Airport	Maximum...	13	-7	11	37	15	35	23	21	26	33	10	17	29	32	0	28	30	18	38	15	1	18	38	33	38	36	29	-2	13	15	13	21.2	
	Minimum...	-11	-23	-27	1	4	11	6	8	9	10	-13	-13	17	3	-15	-17	-9	6	10	-14	-19	-14	9	12	14	14	-6	-18	-3	-5	0	-3.2	
Sharon	Maximum...	19	7	5	34	30	35	30	30	35	35	34	19	31	26	0	28	27	30	37	15	4	28	37	35	37	41	32	15	20	12	12	25.2	
	Minimum...	4	-24	-27	5	-2	8	9	4	12	19	2	0	-13	-2	-10	-13	3	3	25	-13	-20	-6	15	20	23	25	12	-4	2	-3	-2	1.5	
Steele	Maximum...	20	4	9	35	30	34	34	32	35	37	36	24	31	31	3	32	38	38	36	23	3	35	40	39	38	46	40	22	21	16	15	28.5	
	Minimum...	4	-22	-31	9	0	14	11	14	8	25	10	13	19	0	-16	-12	18	8	22	-11	-19	0	22	19	29	27	17	8	10	-6	-4	6.0	
Valley City	Maximum...	22	14	7	36	34	36	36	35	36	37	38	21	33	32	6	32	32	39	38	28	6	35	40	38	42	47	42	28	25	24	15	30.1	
	Minimum...	-10	-16	-31	7	4	9	13	10	13	19	10	8	18	6	-7	-11	18	3	24	-10	-15	-3	20	26	32	30	14	4	10	2	4	7.1	
Wahpeton	Maximum...	18	15	7	33	31	37	35	35	36	35	35	20	33	33	8	32	35	39	38	37	7	34	46	41	42	52	49	29	27	22	18	30.9	
	Minimum...	2	-14	-24	-2	2	6	6	15	12	22	7	4	17	6	-3	-4	20	3	26	-6	-11	1	20	28	28	30	20	9	15	3	8	7.9	
Williston	Maximum...	19	-2	13	36	37	36	3																										

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James Red.	T.	T.								T.	T.		T.	.15	.19			T.		T.												0.34
Cassell	James Red.	T.	.01		.03									.02	.06	.14						T.					.02		T.	T.			0.30
Cooperstown	Shenynne	T.						T.	T.		T.	T.			.01	.42						T.					T.						0.61
Courtenay	James	T.													.01	.08	.22		T.							.05	T.		T.	.02			0.52
Devils Lake ^{1 5}	Devils Lake	.04					.01	T.			T.	.01		T.	.06	.03			T.								T.		T.	.01		T.	0.44
Edgeley	Devils Lake	.01					.01	.02			T.	.01		T.	.16							T.					.03	T.	T.	.11		.02	0.24
Edmore	Devils Lake														.08	.10						T.						T.	.02	.03	.10		0.27
Ellendale	James	.03					T.		.02	T.	T.	T.	.01	.12	.01	.01	T.				T.	T.			T.	.01			.02			.02	0.32
Fargo ^{1 5}	Red.	.03																															0.20
Forman	Shenynne																										.12						0.15
Fullerton	James	.03																											.07	T.		T.	0.20
Gackle	do																																0.15
Grafton	Red.	T.						.07								.35													.03				0.41
Grand Forks Airport ³	do	.01	T.			T.	.01	.07			T.	T.	T.	.24	.40	.01	.07									T.	T.					T.	0.75
Hankinson ²	do		T.																														0.15
Hannah	Pembina			T.												.12																	0.27
Hillsboro	Red.	T.														.20	T.					T.							.08				0.22
Jamestown Airport ³	James	.04	T.								T.	T.	.01	T.	.01	.08		T.	T.											10	T.	.03	0.41
Langdon	Pembina	.02					.01	.08	.02						.01	.35	.04											.02		.05			0.63
Larimore	Red.														.21																		0.21
Lisbon	Shenynne	.02													T.	.07															.06	T.	0.15
Mayville	Red.							.01							.01	.07																	0.09
McHenry	James	T.										.03			T.	.20											.02				T.		0.25
McLeod																																	

[WBO, Minneapolis, 5-21-47-1050]

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Not list

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

JUL 3 1947

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVI BISMARCK, N. D., FEBRUARY 1947 No. 2

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The temperature averaged 1.1° below the normal with the greatest departures over the west and north portions. Conditions were severe from the 3d through the 8th. The 3d, with temperatures below zero and strong, gusty wind with gusts up to 65 miles per hour, was one of the states most disagreeable days. In the area from Beach to Bismarck, the drain on the natural gas supply was so great that it reached the danger point during the evening of the 3d in Bismarck-Mandan. Stormy conditions also prevailed on the 5th, 6th, 7th and 8th. Precipitation generally was light, with heavy amounts along the northern tier of counties. The severe blizzard on the 6th, 7th and 8th, extending from divide and northern Williams counties eastward to Rolette County, blocked roads, both highway and branch railroads in this area with huge drifts, in scattered instances nearly the depth of telephone poles. In northern Williams, Divide and Burke counties, the open country was blown clean of snow, but where there were any wind-breaks such as trees, farm buildings, etc., drifts would form 12 to 15 feet deep with a roof often times the only thing visible. Eastward across Bottineau and Rolette counties, the snow was not moved completely from the open country, but drifts were 8 to 10 feet deep near trees or a group of farm buildings for distances of 300 to 600 feet on the highways. Some of the side roads were blocked most of February. The normal loss of pheasants in a blizzard would be about 5%, but it is thought the loss will run nearer 50% in this storm, in all but the southwest portion of the state. Sunshine was 13% below normal except for the northwest portion which was near the seasonal normal. Livestock have wintered well. Ice on rivers, lakes and ponds reached normal thickness of 20 to 29 inches.—M.S.C.

TEMPERATURE

The mean temperature for the state was 8.8° , or 1.1° below the 1892-1947 average for February. The mean temperature for the eastern division was 8.2° ; for the middle division, 7.7° ; and for the western division, 10.4° . The highest mean temperature was 15.2° at Medora and Marmarth, and the lowest, 1.0° at Bottineau, making a range in mean temperature of 14.2° . The absolute range was 89° , from 53° at Medora on the 12th, to -36° at Stanley on the 1st and Portal on the 2d. The average daily excess in temperature for the state since January 1, 1947, is 4.0° .

PRECIPITATION

The average precipitation for the state was 0.40 inch, or 0.06 inch less than the 1892-1947 average for February. In the eastern division the average amount was 0.54 inch; in the middle division, 0.40 inch; and in the western division, 0.27 inch. The greatest monthly amount reported was 1.42 inches at Kenmare; the least was 0.03 inch at Williston. The greatest amount recorded in any 24 consecutive hours was 0.65 inch at Bowbells on the 7-8th. The accumulated deficiency in precipitation for the state since January 1, 1947, is 0.18 inch. The average snowfall was 3.5 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)			Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	30.62	4	29.47	5	12.8	49	nw.	3	88	88	70	75	47
Devils Lake...	30.52	22	29.45	2	10.7	36	nw.	3	88	78	71	76	40
Fargo.....	30.48	18	29.44	2	14.3	48	nw.	3	89	88	82	45	1558
Williston.....	30.65	3	29.38	2	8.2	30	nw.	5	84	86	75	56	1536

† And other dates.

COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	10.0	62	-45	0.59	0.77	0.37	0.58	4.9	4	14	7	8	
1893...	-0.3	52	-41	1.01	0.51	0.22	0.58	5.7	4	12	7	9	
1894...	8.0	55	-54	0.28	0.23	0.16	0.22	2.3	2	14	9	5	
1895...	5.9	65	-40	0.33	0.41	0.33	0.36	3.6	4	13	7	8	
1896...	14.3	64	-50	0.56	0.29	0.38	0.41	4.3	3	12	9	8	
1897...	6.1	52	-29	1.14	1.05	1.30	1.16	11.5	7	12	7	9	
1898...	13.3	65	-40	0.46	0.46	0.46	0.46	4.5	3	13	8	7	
1899...	0.4	60	-34	0.22	0.16	0.22	0.20	1.9	3	14	8	6	
1900...	1.3	46	-48	0.20	0.55	0.66	0.47	4.5	4	12	9	7	
1901...	7.1	60	-48	0.32	0.30	0.31	0.31	2.9	3	15	7	6	
1902...	12.1	51	-31	0.73	1.10	1.12	0.98	6.7	6	10	6	12	
1903...	3.1	46	-33	0.48	0.25	0.41	0.38	3.7	3	19	4	5	
1904...	-2.1	52	-49	0.81	0.56	0.69	0.69	7.6	5	13	6	10	
1905...	8.2	64	-42	0.25	0.31	0.37	0.31	2.9	2	19	4	5	
1906...	9.8	57	-46	0.20	0.07	0.28	0.18	1.4	2	13	8	7	
1907...	10.7	58	-38	0.36	0.21	0.42	0.33	2.8	3	15	7	6	
1908...	13.8	62	-49	1.56	0.68	0.87	1.04	10.1	5	12	7	10	
1909...	9.6	56	-34	0.28	0.36	0.37	0.34	3.7	4	11	7	10	
1910...	3.4	56	-34	0.57	0.40	0.61	0.59	5.6	4	14	7	7	
1911...	7.3	55	-50	0.84	0.74	0.52	0.70	8.0	3	15	8	5	
1912...	11.8	48	-38	0.19	0.18	0.09	0.15	1.7	2	10	9	10	
1913...	8.5	64	-33	0.08	0.09	0.09	0.09	1.0	2	12	9	7	
1914...	1.0	57	-44	0.34	0.28	0.40	0.34	3.8	3	12	8	8	
1915...	17.4	50	-47	1.32	0.27	0.26	0.62	6.1	3	9	5	14	
1916...	6.4	55	-20	0.41	0.45	0.58	0.48	4.8	4	14	8	7	
1917...	-0.7	61	-39	0.84	0.58	0.55	0.66	7.1	5	10	8	10	
1918...	10.8	60	-48	0.20	0.16	0.29	0.22	2.3	3	13	9	6	
1919...	7.7	58	-41	0.68	0.73	0.44	0.62	6.5	5	10	8	10	
1920...	12.5	53	-40	0.38	0.25	0.28	0.30	3.2	3	11	9	9	
1921...	19.9	64	-36	0.52	0.39	0.25	0.39	3.8	3	11	10	7	
1922...	0.7	45	-33	1.41	1.17	1.00	1.19	12.8	5	13	6	9	
1923...	4.1	48	-39	0.78	0.64	0.51	0.64	7.2	4	13	7	8	
1924...	20.3	67	-40	0.39	0.43	0.35	0.39	4.2	3	14	6	9	
1925...	16.5	62	-27	0.48	0.30	0.08	0.29	3.6	3	10	9	9	
1926...	22.3	58	-39	0.47	0.44	0.31	0.41	3.7	4	9	9	10	
1927...	13.3	50	-19	0.49	0.31	0.27	0.36	3.1	4	12	7	9	
1928...	18.8	59	-31	0.13	0.06	0.15	0.11	1.2	2	14	8	7	
1929...	2.8	44	-19	0.30	0.28	0.30	0.29	3.3	4	12	8	8	
1930...	21.7	63	-44	1.41	1.15	0.97	1.18	11.7	6	11	8	9	
1931...	28.0	62	-30	0.34	0.20	0.31	0.28	2.9	2	14	6	8	
1932...	13.6	69	-31	0.30	0.37	0.30	0.32	4.3	3	12	9	8	
1933...	7.9	58	-45	0.25	0.26	0.34	0.28	3.3	3	13	8	7	
1934...	19.5	61	-30	0.08	0.04	0.07	0.06	0.7	1	13	8	7	
1935...	24.0	63	-25	0.21	0.24	0.15	0.20	1.9	2	13	7	8	
1936...	-12.9	43	-60	0.90	0.70	0.50	0.70	9.1	6	12	8	9	
1937...	6.8	55	-35	0.83	0.40	0.25	0.49	6.6	4	12	9	7	
1938...	7.2	60	-35	0.71	0.63	0.71	0.68	8.6	5	11	7	10	
1939...	-0.8	51	-46	0.85	0.60	0.45	0.63	9.7	5	13	8	7	
1940...	15.0	52	-29	0.63	0.59	0.60	0.61	7.8	7	5	8	16	
1941...	12.2	57	-40	0.23	0.18	0.24	0.22	2.8	3	12	8	8	
1942...	14.1	57	-30	0.19	0.30	0.58	0.36	4.6	5	6	9	13	
1943...	15.1	62	-32	0.75	0.42	0.33	0.50	6.4	5	11	9	8	
1944...	11.2	50	-43	0.19	0.34	0.34	0.29	4.3	4	13	7	9	
1945...	15.1	52	-29	0.62	0.23	0.23	0.36	4.6	4	12	8	8	
1946...	10.4	60	-40	0.87	0.67	0.44	0.66	8.1	6	10	9	9	
1947...	8.8	54	-36	0.54	0.40	0.27	0.40	3.5	5	7	9	12	
Period	9.9	69	-60	0.54	0.43	0.42	0.46	5.0	4	12	8	8	

NOT
LIST

Climatological Data for February 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	7.2	.....	40	16	-21	1†	0.66	.....	0.25	7-8	7.6	6	17	4	7	nw.	Albert Thoren.
Carrington	Foster	1,579	50	6.4	-2.5	41	13	-23	1†	0.77	+0.29	0.27	7	9.5	6	6	5	17	nw.	Soo Line Agent.
Casselton	Cass	934	52	10.5	+1.4	42	13	-18	1	0.78	+0.19	0.25	8	7.2	6	5	10	13	n.	Joseph L. Farrell.
Cavalier	Pembina	894	40	5.7	-0.4	38	16	-21	1†	0.25	-0.26	0.15	7	4.0	2	2	19	7	nw.	City Light & Power Co.
Colgate	Steele	1,180	14	8.0	.....	42	13	-24	1	0.28	-0.21	0.16	16	4.4	2	8	11	9	nw.	O. M. Jensen.
Cooperstown	Griggs	1,428	51	8.0	+0.2	42	13	-24	1	0.80	+0.28	0.55	14	3.0	2	7	3	18	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	17	.....	.....	40	13	-25	1	0.58	0.00	0.38	5-6	6.0	3	9	12	7	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	6.8	-1.7	38	13	-25	1	0.44	-0.06	0.22	5-6	6.1	6	5	7	16	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,588	47	8.8	-4.0	40	13†	-23	1	0.31	-0.17	0.18	6	3.5	5	7	8	13	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	3.0	-1.8	34	12†	-29	1	0.46	+0.05	0.25	5-6	5.3	5	9	13	6	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	10.2	-2.9	44	13†	-28	7	0.30	-0.19	0.11	6	3.8	4	4	6	18	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	9.3	+1.2	43	13	-17	1	0.41	-0.28	0.20	13-14	2.9	8	4	3	21	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	56	12.3	+0.4	41	13	-20	1	0.54	+0.04	0.25	6†	3.4	3	11	9	8	nw.	Art Waterman.
Fullerton	Dickey	1,439	50	12.2	-0.2	43	13†	-20	1	0.60	-0.11	0.41	6	5.7	5	4	7	17	nw.	F. O. Alin.
Gackle	Logan	1,951	17	10.0	-0.5	40	16	-24	1	0.24	-0.21	0.20	7	3.5	2	1	20	7	nw.	Tony Martin.
Grafton	Walsh	827	56	8.0	+0.7	41	16	-19	1†	0.70	+0.13	0.35	7	7.0	6	6	13	9	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	7.0	-0.7	36	16	-19	1	0.40	-0.16	0.17	13	3.9	7	4	9	15	nw.	University of N. Dak.
Grand Forks Aprt. 2 1/2 mi. W	Grand Forks	834	7	6.5	.....	35	16	-20	1	0.45	.....	0.18	24-25	5.0	12	2	6	20	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	9.4	-4.7	36	13	-18	3	0.67	+0.13	0.28	6	7.7	6	5	8	15	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	54	1.4	-1.2	33	13	-29	4	0.91	+0.32	0.29	6	11.3	5	2	19	7	nw.	A. E. Prior.
Hillsboro	Trall	901	42	9.4	-0.8	41	13	-19	1	0.64	+0.09	0.30	13-14	7.4	7	5	13	10	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	10.4	+0.5	42	13	-21	1	0.89	+0.30	0.46	5-6	7.4	5	6	9	13	nw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE	Stutsman	1,494	7	9.6	.....	43	13	-23	1†	0.82	.....	0.38	5-6	6.6	10	4	5	19	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	9.4	.....	45	16	-25	7	0.42	.....	0.28	13-14	1.7	4	5	10	13	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	3.5	-1.3	34	16	-28	4	0.90	+0.27	0.24	3	8.1	12	10	11	7	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	55	7.9	+0.2	40	16	-22	1	0.34	-0.21	0.15	6	4.5	3	4	4	20	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	11.2	-0.4	44	13	-19	1	0.81	+0.22	0.49	6	6.0	3	6	5	17	nw.	J. O. Halverson.
Mayville	Trall	975	52	8.9	-0.9	39	13	-20	1	0.54	+0.10	0.21	13-14	4.4	7	6	15	7	nw.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	25	6.6	+1.2	41	13	-26	1	0.53	+0.08	0.19	13-14	1.5	6	5	8	15	nw.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	36	11.2	-1.8	44	13	-18	1	0.11	-0.45	0.08	7	4.0	2	12	6	10	n.	J. G. Carlson.
Oakes	Dickey	1,318	19	10.5	-2.4	44	13	-20	1	0.41	-0.05	0.23	6	5.7	4	9	4	15	nw.	C. M. Hagen.
Park River	Walsh	998	44	6.6	-1.1	37	13	-22	1†	0.27	-0.15	0.13	6	3.8	4	11	5	12	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	3.2	+0.4	33	16	-26	5	0.21	-0.41	0.05	8	2.7	9	2	6	20	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	5.1	.....	38	13	-25	1	0.50	0.00	0.26	6	5.1	4	6	12	10	nw.	T. C. Overland.
Sharon	Steele	1,516	24	7.3	-2.2	39	13	-24	1	0.88	+0.40	0.25	7	9.3	8	3	14	11	nw.	Hugh Lyon.
Valley City	Barnes	1,229	43	10.8	-0.7	43	13	-18	1	0.40	-0.19	0.36	6	4.6	3	4	11	13	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	10.6	-1.8	46	13	-18	1	0.30	-0.17	0.20	6	5.4	5	8	14	6	nw.	State School of Science.
Average for Eastern Division				8.2	-0.8	46	13	-29	1	0.54	0.00	0.55	14	5.4	5	6	9	13	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	9.9	-1.5	43	16	-23	2	0.07	-0.38	0.03	8	1.1	3	10	8	10	nw.	Eddie H. Glur.
Belcourt	Rolette	1,960	3	3.6	.....	42	13	-34	4	0.65	.....	0.31	6	6.4	7	5	13	10	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	5.0	-1.5	35	12	-30	1	0.71	+0.35	0.32	6	8.0	5	4	9	15	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	10.8	-0.8	46	16	-20	1†	0.31	-0.08	0.24	7-8	4.6	5	4	7	17	nw.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE	Burleigh	1,650	8	11.6	+3.1	46	16	-22	1	0.29	-0.15	0.26	7-8	4.5	4	4	7	17	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	1.0	-3.9	38	13	-35	1	0.71	+0.35	0.29	5	9.6	5	9	4	15	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	8.4	-4.7	43	13	-25	1	0.38	-0.15	0.20	6	5.0	3	4	8	16	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	36	13.0	-1.5	47	16	-26	1	0.08	-0.40	0.04	24	0.9	3	4	12	12	nw.	J. W. Evens.
Center	Oliver	2,100	10	9.3	.....	44	17	-26	1	0.13	.....	0.07	7	3.3	4	6	17	5	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	6.1	-4.3	40	13	-28	2	0.88	+0.41	0.40	7-8	11.6	9	6	8	14	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	52	4.0	-2.7	44	13	-30	1	0.34	-0.08	0.24	5-6	4.5	2	6	11	11	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	42	2.2	-5.3	38	12	-31	2	0.62	+0.25	0.30	5	6.8	6	9	9	10	nw.	E. R. Sherman.
Fessenden	Wells	1,610	36	7.2	-2.5	39	13	-25	1	0.29	-0.23	0.07	7	2.6	4	6	13	9	n.	John V. Zuber.
Fort Yates	Sioux	1,670	48	13.0	+0.4	49	16	-20	1	0.20	-0.26	0.10	7†	2.2	2	11	8	9	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	27	7.4	-4.6	41	12	-28	1	0.30	-0.17	0.24	5-6	5.5	2	8	7	13	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	10.4	-0.7	42	16	-25	1	0.56	+0.05	0.41	7-8	5.7	4	5	9	14	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	41	7.7	-2.3	41	16	-28	1	0.79	+0.36	0.48	6-7	10.1	4	14	5	9	nw.	Fred Roble.
Hansboro	Towner	1,597	40	3.8	-2.3	39	13	-29	1	0.52	+0.02	0.40	5-6	7.1	5	5	12	11	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	41	13	-29	1	0.11	-0.34	0.09	5-6	1.0	2	1	12	15	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	5.4	.....	37	12	-28	1	0.36	.....	0.25	6	4.5	3	7	9	12	w.	John Dulmage.
Linton	Emmons	1,711	31	13.4	-0.4	48	16	-23	1	0.06	-0.36	0.03	8	0.9	4	6	9	13	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	33	7.4	-2.8	39	13	-27	1	0.85	+0.45	0.34	7	9.7	7	3	10	15	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	34	10.0	-2.6	44	16	-22	1	0.17	-0.22	0.10	8	2.1	5	6	4	18	nw.	No. Gt. Plains Field. Sta.
Max	McLean	2,093	19	</																

Climatological Data for February 1947—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer		
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours †	Date	Snowfall, unmelted	Number of days						
															With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy	
Western Division—Con.																					
Epping	Williams	2,224	39	9.1	-0.3	45	12	-32	1	0.20	-0.20	0.13	7	2.9	3	16	4	8	nw.	T. Beachler.	
Fairfield, 9½ miles N	Billings	2,650	19							0.12	-0.30	0.04	6†	1.0	4	10	3	15	nw.	Mrs. Edith Larson.	
Fryburg, 2 miles N	Billings	2,790	30	14.2		46	12	-26		0.17	-0.28	0.04	18	2.2	7	6	9	13	nw.	Verne King.	
Golva, 1 mile E	Golden Valley	2,781	7	11.5	-4.5	49	12	-27	3	0.18	-0.22	0.04	19	2.1	7	5	15	8	nw.	Chester K. Puda.	
Grenora	Williams	2,114	39	9.4	+0.4	43	12†	-31	1	0.16	-0.29	0.13	8	2.5	2	7	18	3	nw.	L. D. Nielson.	
Halliday	Dunn	2,073	6							0.09		0.09	7	1.1	1	6	14	8	nw.	John Kisse.	
Hettinger	Adams	2,675	41	13.4	-3.1	52	12	-25		0.11	-0.32	0.07	18-19	2.5	2	12	13	3	nw.	Edgar Martin.	
Kenmare	Ward	1,799	16	5.8	-2.4	41	12†	-30	1	1.42	+1.03	0.55	7-8	14.7	7	7	7	14	nw.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	39	15.2	-2.0	50	12†	-20	1	0.46	+0.05	0.10	6†	8.7	6	8	9	11	nw.	S. P. Grane.	
Medora, 1½ mi. W	Billings	2,271	33	15.2		53	12	-19	7	0.11	-0.28	0.09	6-7	1.2	2	16	7	5	sw.	Harry Roberts.	
Mott	Hettinger	2,424	41	13.4	-0.7	51	12	-22	1	0.13	-0.35	0.05	19	1.3	5	10	6	12	nw.	Northern Pacific Agent.	
New England	Hettinger	2,621	56	12.0	-2.5	50	12	-21	1†	0.48	-0.01	0.10	6-7	5-5	11	8	18	2	nw.	Alfred Hasel.	
New Hradec, 1 mile E	Dunn		6	12.2		42	12	-23	1	0.06		0.02	7	0.6	4	7	10	11	nw.	Peter F. Fieck.	
Parshall	Mountrail	1,929	33	8.6	-0.1	43	12†	-29	1	0.27	-0.12	0.10	6-7	3.0	6	8	10	10	nw.	C. E. Shubert.	
Portal	Burke	1,954	34	2.0	-4.2	41	12	-36	1	0.56	+0.18	0.20	5	7.0	4	5	15	8	nw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	43	5.5	-6.3	45	16	-33	1	0.60	+0.15	0.40	7	6.0	3	5	13	10	nw.	E. J. Lewis.	
Richardton, 1½ miles N	Stark	2,467	32	13.5	-1.2	45	16	-26	1	0.22	-0.19	0.12	6	1.2	3	7	8	13	nw.	Assumption Abbey.	
Ryder	Ward	2,108	19							0.29	-0.19	0.07	14	3.2	6	5	9	14	nw.	S. C. Schellenbaum.	
Sanish	Mountrail	1,835	22	7.8	-0.8	42	12	-30	1	0.18	-0.27	0.05	13	2.4	5	3	14	11	w.	H. J. Bugge.	
Stanley	Mountrail	2,258	10	4.8		44	12	-36	1	0.55		0.20	7	6.4	3	11	8	9	nw.	Leroy Edwards.	
Tagus	Mountrail	2,179	19							0.65	+0.23	0.49	7-8	5.9	6	11	8	9	nw.	Geo. N. Pilgard.	
Tioga	Williams	2,279	19							0.30	-0.07	0.15	7	3.9	3	5	11	12	nw.	L. A. Simon.	
Trotters	Golden Valley		22							0.17	-0.21	0.05	13	3.0	6	3	14	11	nw.	Walter Grunewald.	
Van Hook	Mountrail	1,864	7	9.8		45	16	-28	1	0.11		0.07	15	0.6	5	10	10	8	nw.	H. Glenn Sims.	
Watford City	McKenzie	2,004	35	12.4	-1.3	47	12†	-27	1	0.09	-0.34	0.04	13	0.5	4	4	8	16	nw.	J. C. Zeller.	
Wildrose	Williams	2,258	18							0.27	-0.19	0.13	5	3.7	4	7	9	12	nw.	Jonathan Winkjer.	
Williston	Williams	1,878	69	10.2	+2.1	47	12	-27	1	0.03	-0.38	0.03	25	1.2	1	4	4	20	nw.	U. S. Weather Bureau.	
Average for Western Division						10.4	-1.8	53	12	-36	1†	0.27	-0.15	0.65	7-8	3.3	4	8	9	11	nw.
Average for the State						8.8	-1.1	53	12	-36	1†	0.40	-0.06	0.65	7-8	3.5	5	7	9	12	nw.

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for February 1947

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	9	29	-8	10	27	15	-3	11	13	26	28	39	40	42	39	48	20	15	18	-18	21	14	14	18	17	16	21	20				20.6	
	Minimum	-22	-23	-14	-16	-16	0	-11	-6	-6	-8	-10	-1	16	20	22	25	18	-8	-8	-5	-5	2	5	9	0	9	7	4				-0.8	
Bismarck Airport	Maximum	1	29	12	21	30	24	1	5	19	24	25	42	41	38	36	46	35	15	18	-15	21	14	17	21	20	19	21	17				22.4	
	Minimum	-22	-6	-15	-17	-5	-16	-17	-4	1	-10	-7	2	19	21	28	28	1	-5	-4	-2	6	0	-3	11	10	4	-3	6				0.7	
Bottineau	Maximum	2	10	-11	0	8	10	0	10	12	18	12	34	38	27	30	33	4	0	4	2	11	12	5	19	22	17	15	20				13.0	
	Minimum	-35	-34	-20	-29	-21	-6	-18	-7	-2	7	-12	-11	11	5	8	10	-3	-22	-18	-26	-17	-6	-12	-10	-8	3	-14	-6				-11.0	
Carson	Maximum	6	27	42	28	29	26	1	5	17	25	30	44	40	43	46	47	37	20	16	18	24	18	17	16	20	20	18	20				25.0	
	Minimum	-26	-10	-17	-17	-12	-6	-20	-7	3	-4	-8	14	23	31	25	12	14	-7	5	-5	4	3	-10	10	1	5	-9	3				0.9	
Crosby	Maximum	-4	19	-15	15	34	9	-10	2	14	16	20	38	41	36	34	37	6	8	3	10	13	6	5	12	18	14	20	15				14.7	
	Minimum	-32	-32	-21	-21	-19	-13	-22	-13	-7	-12	-12	17	12	15	21	-2	-12	-11	-12	-11	-6	-14	-9	2	0	-6	-5				-8.5		
Devils Lake	Maximum	-1	18	10	3	8	9	2	7	15	23	18	38	38	27	28	35	33	6	9	10	16	10	10	18	17	14	22	16				16.4	
	Minimum	-25	-8	-17	-23	-10	-13	-14	-2	3	-1	-4	2	18	7	16	15	-9	-12	-5	-10	-2	-7	-4	10	12	3	2	2				-2.9	
Dickinson Airport	Maximum	0	43	-4	27	42	33	1	5	14	24	32	45	42	43	40	44	30	11	14	14	19	16	14	14	16	17	16	22				22.6	
	Minimum	-22	-4	-19	-13	14	-19	-21	-8	0	-5	4	15	31	26	32	29	-1	8	4	-7	0	-4	-11	4	7	-1	7	6				0.8	
Dunn Center	Maximum	1	29	38	25	33	39	1	4	16	23	26	42	42	43	39	44	40	16	13	15	21	16	11	16	21	20	21	17				24.0	
	Minimum	-24	-7	-20	-16	6	-8	-20	-8	2	-11	-14	5	28	21	33	29	12	-8	2	-6	1	6	-7	8	5	3	-4	5				0.5	
Fargo Airport	Maximum	1	15	14	4	7	9	3	8	17	27	29	33	43	28	29	37	36	10	16	14	14	13	12	20	19	16	16	18				18.1	
	Minimum	-17	-5	-11	-15	-14	-5	-7	0	5	-2	5	25	11	19	17	13	-3	-7	-1	1	-3	-2	0	10	11	2	-3	1				0.5	
Fessenden	Maximum	-5	13	11	10	8	7	0	5	14	25	16	35	39	37	33	39	19	9	11	14	18	14	9	11	9	13	19	17				16.1	
	Minimum	-25	-10	-18	-20	-5	-9	-18	-7	3	-5	-6	-2	30	13	20	24	3	-11	-5	-11	5	0	-9	-4	5	5	2	8				-1.7	
Fullerton	Maximum	12	17	11	12	12	14	2	7	22	25	27	39	43	39	34	43	35	15	19	18	20	17	13	20	21	18	18	20				21.2	
	Minimum	-20	-7	-13	-15	-4	-1	-14	-3	5	-1	2	4	26	18	25	20	15	-6	3	1	10	8	-1	12	13	10	2	4				3.2	
Garrison	Maximum	-2	22	22	20	22	27	3	3	18	23	23	41	40	34	37	42	33	13	15	15	21	13	15	18	26	15	21	17				21.1	
	Minimum	-25	-6	-18	-17	-5	-13	-14	-8	1	-7	-8	3	22	18	27	28	-2	-7	-2	-6	5	-2	-5	9	9	4	-4	3				-0.4	
Golva	Maximum	9	44	22	29	45	35	0	3	18	29	34	49	47	45	42	45	36	10	11	18	20	23	10	12	13	13	14	18				24.8	
	Minimum	-23	-2	-27	-9	1	-7	-14	-21	-2	-8	3	5	33	26	32	28	0	-12	-8	-12	5	8	-24	5	2	-5	-17	2				-1.8	
Grafton	Maximum	12	8	11	1	2	8	5	7	17	24	24	31	32	23	25	41	35	8	9	11	14	14	12	21	22	20	22	19				17.1	
	Minimum	-19	-11	-12	-19	-17	-3	-6	-1	4	0	-5	0	20	8	17	20	-2	-11	-5	-5	-3	-5	-1	9	11	3	2	0				-1.1	
Grand Forks Airport	Maximum	-2	12	12	-1	4	8	3	7	17	22	20	31	32	21	24	35	34	9	11	11	13	11	11	21	18	14	21	18				15.6	
	Minimum	-20	-11	-13	-19	-18	-5	-5	0	-1	-3	-4	2	17	7	16	14	-9	-11	-4	0	-8	-7	-1	9	12	-2	-4	5				-2.6	
Jamestown Airport	Maximum	-1	16	24	8	7	12	1	7	16	25	25	36	43	31	33	40	37	11	19	15	17	15	11	19	20	18	19	19				19.4	
	Minimum	-23	-10	-14	-17	-5	-13	-23	-4	4	-1	-5	-1	27	15	18	19	-1	9	-1	4	6	0	-3	10	10	6	3	8				-0.1	
Kenmare	Maximum	6	21	11	18	20	7	-5	8	15	24	19	41	41	38	32	40	10	10	7	13	13	7	10	17	22	15	20	15				16.5	
	Minimum	-30	-29	-20	-19	-15	4	-20	-12	-7	1	-4	3	18	17	17	23	1	-10	-10	-10	-5	-10	-9	5	2	-1	5				-5.0		
Langdon	Maximum	7	2	2	1	5	8	1	6	16	20	19	27	32	22	25	34	28	6	10	7	16	15	10	20	23	16	24	22				15.1	
	Minimum	-26	-18	-17	-28	-19	-5	-12	-3	0	-9	-9	-8	22	3	12	-2	-8	-22	-16	-20	-12	-18	-11	6	7	-1	7	10				-8.1	
Marmarth	Maximum	6	46	41	31	49	42	7	8	10	25	38	50	46	47	45	50	33	26	15	25	20	25	13	15	19	17	15	17				27.9	
	Minimum	-20	-5	-16	-2	13	4	-12	-10	0	-6	-2	14	32	25	32	24	17	-10	3	-14	12	5	-15	-6	5	-3	-15	3				2.4	
Minot Airport	Maximum	-6	22	8	15	18	15	-5	6	15	21	15	41	41	36	33	39	27	9	10	10	12	10	11	17	18	13	18	14				16.7	
	Minimum	-27	-14	-18	-21	-3	-18	-17	-6	3	0	-2	4	18	15	20	24	-5	-9	-4	-8	-2	-3	-6	7	10	2	-3	1				-2.3	
Mott	Maximum	0	14	34	29	45	40	7	6	16	28	33	51	47	50	45	49	46	24	16	17	20	20	16	17	19	15	16	20				26.4	
	Minimum	-22	-6	-20	-20	-5	4	-19	-6	5	-10	0	10	22	28	32	28	20	-8	2	-11	-4	0	-14	10	4	2	-17	5				0.4	
Pembina Airport	Maximum	7	10	10	-11	-2	6	3	9	15	15	13	27	23	19	21	33	32	3	5	6	16	5	9	20	18	11	24	15				12.9	
	Minimum	-21	-14	-18	-21	-26	-8	-3	-5	-2	1	-9	-13	-9	12	5	12	-15	-15	-13	-14	-6	-14	-7	6	9	0	-2	-9				-6.5	
Sharon	Maximum	10	7	7	5	3	8	0	6	13	21	19	31	39	28	27	35	32	6	15	10	16	14	12	20	22	18	20	19				16.5	
	Minimum	-24	-6	-17	-21	-13	-3	-10	-2	2	-3	0	-2	23	9	18	15	0	-12	-6	-5	-8	-6	-5	1	8	10	-8	0				-1.9	
Steele	Maximum	-3	18	18	15	15	0	5	15	25	23	39	38	35	34	41	37	14	15	14	18	15	14	18	17	17	18	17				19.5		
	Minimum	-26	-10	-18	-19	-1	-3	-18	-8	3	-7	-8	2	24	19	24	23	8	-10	0	-9	7	3	-3	8	10	7	5	2				0.2	
Valley City	Maximum	15	9	22	8	9	13	3	7	19	25	23	36	43	38	32	41	38	17	17	18	16	15	13	21	20	27	18				20.8		
	Minimum	-18	-12	-13	-17	-11	-2	-4	-5	0	0	0	0	24	15	21	14	9	-4	-4	-4	4	1	-1	6	12	8	-1	4				0.8	
Wahpeton	Maximum	16	12	19	5	6	10	5	16	26	30	35	46	41	31	38	38	12	18	17	18	15	13	20	21	18	15	20				20.2		
	Minimum	-18	-4	-11	-15	-13	-2	-10	-2	0	-3	-2	10	27	12	19	18	7	-8	0	4	0	-3	-1	9	15	6	-3	3				1.0	
Williston	Maximum	0	31	9	22	38	35	2	5	18	21	17	47	42	42	39	45	28	11	12	14	12	14	12	17	17	17	18				21.3		
	Minimum	-27	-14	-21	-16	9	-20	-18	-8	-2	-8	-9	7	22	18	29	28	-5	-6	-2	-4	4	6	-2	8	7	10	4	0	6				0.0

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James	.08			T.		.16	.27	.16	.05	T					.05							T.	T.		T.	T.							0.77	
Casselton	Red.					.18			.25	.02						.24							T.	T.		T.	T.							0.78	
Cooperstown	Sheyenne						.25									.55						T.	T.		T.	T.								0.80	
Courtenay	James						.38	.10	.10													T.	T.		T.	T.								0.58	
Devils Lake ^{1 5}	Devils Lake	T.	T.			.13	.09	.04	.04	T.					.16	T.	.02	.01	T.		T.	T.	T.	T.		T.	T.							0.44	
Edgeley	James		T.	T.		T.	.18	.05	.04	T.						.02			T.		T.	T.	T.	T.		T.	T.							0.31	
Edmore	Devils Lake		T			T.	.25		.02	.03						.14						T.	T.		T.	T.								0.46	
Ellendale	James	.02					.11	.07	.10													T.	T.		T.	T.								0.30	
Fargo ^{1 5}	Red.	T.	T.			.06	.04	.02	.04	T.			T.	.13	.07	T.	T.	.04			T.	T.		T.	T.		T.	T.						0.41	
Forman	Sheyenne						.25									.25	T.					T.	T.		T.	T.								0.54	
Fullerton	James	.04		T.		T.	.41	.10	.02	T.				T.	.03						T.		T.		T.	T.								0.60	
Gackle	do							.20	.04																	T.	T.							0.24	
Grafton	Red.		.01					.35	T.	.09						.19											.03	.03							0.70
Grand Forks Airport ³	do	T.	.01			T.	.02	T.	.01	.01					.05	.04	T.	.01	.01		T.	T.	T.	T.	T.		.03	.03						0.45	
Hankinson ²	do	.08					.28	.20	.03							.06			T.	T.		T.	T.	T.	T.	T.		.02	T.					0.67	
Hannah	Pembina	.08	T.	.17			.29	T.	T.	.20														T.	T.	T.		.02	T.						0.91
Hillsboro	Red.	T.	T.				.07	.08	.14	T.			T			.30	T.	T.	.02			T.		T.	T.		.02	T.						0.64	
Jamestown Airport ³	James		T	T.		.28	.10	.12	.04	.01			T		.19	.02	T.	T.		T.		T.	.03	T.	T.	T.		.01	T.					0.82	
Langdon	Pembina		.02	.24			.15	.05	.07	.05					T	.02	.16									.03	.03		.04					0.90	
Larimore	Red.						.15		.09																		.10							0.34	
Lisbon	Sheyenne	T.					.49	T.	.13							.19											T.	T.						0.81	
Mayville	Red.			T.	T.		.13	.15	.01	T.						.21																			

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 6-27-47-1200]

51.05
INT
V.56³

Not Heat

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

29 1947

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LVI BISMARCK, N. D., MARCH 1947 No. 3

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GENERAL SUMMARY

The month of March was cool. Precipitation was light but it occurred on many days. The southwestern part of the state received the greatest snowfall and also the greatest minus departures in temperature, yet there was not an unusually large number of below zero days. Much cloudy weather prevailed. Due to the large number of cattle and the long period of snow cover, feed shortages were apparent over the southwest and in some central counties as the winter closed. At Williston, the Missouri River ice breakup occurred on the 23d and moved slowly downstream with the break at Bismarck occurring on the 28th. The bottomlands were inundated for 48 to 60 hours as the crest moved downstream, usually reaching heights of 2 to 5 feet above flood stage. The Heart River flooded lowlands and threatened the dikes protecting the city of Mandan on March 26th. U. S. Highway No. 10 was closed, and was reopened to travel on Sunday the 30th. The dike was threatened on several occasions, but sandbagging saved all but the lowest portions of Mandan. The Little Missouri River was the highest known to old time residents of Medora. The local rises were caused by ice jams with consequent flooding and property damage from water and ice. In the Medora area, telephone and telegraph poles were snapped off by ice with disruption of service on transcontinental circuits. There was no direct loss of life, but property loss, mostly to fences, stock, highways, feed and buildings in flooded areas, has been estimated to be several hundred thousand dollars.—M.S.C.

TEMPERATURE

The mean temperature for the state was 22.3°, or 1.7° less than the 1892-1947 average for March. The mean temperature for the eastern division was 23.3°; for the middle division, 22.1°; and for the western division, 21.5°. The highest mean temperature was 27.2° at Wahpeton, and the lowest, 15.8° at Portal, making a range in mean temperature of 11.4°. The absolute range was 89°, from 66° at Fort Yates and Oakes on the 22d, to -23° at Westhope on the 6th. The average daily excess in temperature for the state since January 1, 1947, is 2.1°.

PRECIPITATION

The average precipitation for the state was 0.34 inch, or 0.45 inch less than the 1892-1947 average for March. In the eastern division the average amount was 0.31 inch; in the middle division, 0.28 inch; and in the western division, 0.43 inch. The greatest monthly amount reported was 0.86 inch at Marmarth; the least was 0.04 inch at Gackle. The greatest amount recorded in any 24 consecutive hours was 0.60 inch at Underwood on the 23d. The accumulated deficiency in precipitation for the state since January 1, 1947, is 0.63 inch. The average snowfall was 4.1 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.62	6	29.45	22	11.7	36	nw.	28	83	88	64	65	55	1221
Devils Lake....	30.63	6	29.39	22	9.0	27	nw.	28	86	86	71	74	50	1353
Fargo.....	30.57	6	29.40	22	12.6	39	w.	28	87	89	75	78	49	1252
Williston.....	30.62	6	29.45	22	7.6	27	nw.	20	85	89	68	65	56	1311

† And other dates.

COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	24.2	66	-35	0.87	0.98	0.65	0.83	1.9	4	12	8	11	
1893...	13.9	68	-35	1.10	1.30	0.46	0.95	10.0	5	13	7	11	
1894...	24.8	69	-22	1.20	1.71	1.43	1.45	10.1	5	12	9	10	
1895...	23.2	75	-35	0.07	0.21	0.24	0.17	1.0	2	16	10	5	
1896...	15.7	70	-35	1.19	1.15	1.06	1.13	8.0	4	12	10	9	
1897...	11.9	58	-43	1.15	1.04	1.90	1.96	8.0	4	15	7	9	
1898...	21.3	79	-24	0.77	0.80	0.80	0.79	6.7	5	13	8	10	
1899...	7.5	72	-30	1.23	0.96	0.68	0.96	10.0	5	12	10	9	
1900...	20.3	77	-24	0.96	0.96	1.11	1.01	8.5	5	14	7	10	
1901...	25.3	85	-32	0.95	0.85	0.78	0.86	5.2	5	15	8	8	
1902...	27.4	85	-25	2.75	2.90	2.55	2.73	11.7	8	10	6	15	
1903...	22.1	80	-24	0.78	0.44	0.42	0.55	5.1	3	12	6	13	
1904...	18.2	64	-26	1.26	1.33	1.64	1.41	11.5	5	11	6	14	
1905...	32.5	81	-25	1.09	0.85	0.32	0.75	2.3	4	11	8	12	
1906...	18.5	67	-34	0.31	0.39	0.44	0.38	3.1	3	15	6	10	
1907...	23.1	83	-20	0.57	0.58	1.00	0.72	5.1	4	14	9	8	
1908...	21.1	68	-31	1.17	0.94	1.53	1.21	12.1	8	10	9	12	
1909...	21.0	61	-24	0.34	0.40	0.26	0.33	2.7	4	10	9	12	
1910...	41.3	90	-7	0.83	0.93	1.08	0.94	0.3	3	18	8	5	
1911...	30.6	78	-18	0.14	0.26	0.29	0.23	1.6	2	16	10	5	
1912...	15.4	65	-28	0.28	0.32	0.52	0.37	3.6	3	17	8	6	
1913...	17.2	70	-31	0.82	0.73	1.00	0.85	8.2	6	12	9	10	
1914...	25.5	76	-20	0.83	1.06	0.75	0.88	9.2	5	10	9	12	
1915...	22.9	63	-23	0.38	0.20	0.07	0.22	2.0	2	16	6	9	
1916...	20.3	69	-45	1.43	1.82	1.00	1.42	13.5	6	11	9	11	
1917...	22.2	67	-39	0.44	0.33	0.37	0.38	3.9	3	13	10	8	
1918...	35.0	82	-15	0.32	0.46	0.42	0.40	2.9	2	16	8	7	
1919...	17.8	67	-35	0.63	0.93	0.78	0.78	6.2	4	12	9	10	
1920...	22.4	67	-32	0.46	0.83	1.20	0.83	7.1	4	15	8	8	
1921...	25.2	75	-22	1.07	1.02	0.81	0.97	9.1	6	9	12	10	
1922...	25.8	60	-30	0.96	0.67	0.50	0.71	6.4	4	12	7	12	
1923...	18.3	65	-35	0.34	0.44	0.35	0.38	4.8	4	10	10	11	
1924...	25.5	58	-20	0.32	0.36	0.75	0.48	4.4	4	10	9	12	
1925...	27.4	75	-26	0.74	0.56	0.75	0.68	6.0	4	14	9	8	
1926...	25.8	83	-23	0.35	0.19	0.17	0.24	1.8	3	13	10	8	
1927...	30.4	77	-10	0.90	0.78	0.47	0.72	6.5	5	13	8	10	
1928...	28.1	85	-17	0.69	0.55	0.31	0.52	4.8	3	15	8	8	
1929...	30.5	77	-15	0.68	0.65	1.02	0.78	5.3	5	12	8	11	
1930...	26.1	62	-17	0.17	0.05	0.05	0.09	0.9	1	17	8	6	
1931...	25.7	63	-24	0.99	0.85	0.99	0.94	4.8	5	11	8	12	
1932...	18.9	64	-30	0.52	0.60	0.80	0.64	6.0	6	10	11	10	
1933...	28.5	70	-14	0.46	0.41	0.49	0.45	3.7	3	14	10	7	
1934...	26.3	74	-12	0.43	0.34	0.71	0.49	3.6	4	11	11	9	
1935...	26.3	75	-37	2.00	0.89	0.90	1.26	7.0	5	9	11	11	
1936...	25.4	61	-27	0.73	0.75	0.94	0.81	8.1	6	10	11	10	
1937...	24.8	72	-20	0.42	0.34	0.42	0.39	4.3	3	12	11	8	
1938...	33.1	72	-14	0.63	0.57	0.58	0.59	2.5	4	13	10	8	
1939...	23.3	81	-29	0.33	0.41	0.42	0.39	5.3	3	16	8	7	
1940...	23.1	64	-26	1.19	0.71	0.72	0.87	9.1	7	9	9	13	
1941...	24.5	68	-25	0.65	0.64	0.46	0.58	6.8	5	11	8	12	
1942...	30.0	66	-8	2.77	1.72	1.01	1.83	12.8	9	9	8	14	
1943...	17.0	77	-30	1.08	1.37	1.23	1.23	14.8	7	11	11	9	
1944...	16.7	53	-25	1.08	0.68	0.66	0.81	10.2	8	7	9	15	
1945...	33.3	77	-27	1.12	1.43	1.48	1.34	2.4	6	13	9	9	
1946...	34.8	86	-22	1.10	1.32	0.56	0.99	2.9	5	11	10	10	
1947...	22.3	66	-23	0.31	0.28	0.43	0.34	4.1	6	8	11	12	
Period	24.0	90	-48	0.83	0.79	0.76	0.79	6.1	5	12	9	10	

NAV
HIST.

Climatological Data for March 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours †	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	23.6	.....	55	22	-6	4	0.31	.....	0.12	19	4.3	7	19	5	7	nw.	Albert Thoren.
Carrington	Foster	1,579	50	21.7	-2.0	53	22	-7	7	0.27	-0.42	0.07	9†	3.3	8	8	14	19	.....	Soo Line Agent.
Casselton	Cass	934	52	25.5	+0.8	59	22	-1	4	0.53	-0.23	0.22	20	5.6	7	3	14	14	n.	Joseph L. Farrell.
Cavalier	Pembina	894	40	23.6	+2.6	52	22	-2	4	0.21	-0.55	0.10	14	2.1	4	8	12	11	nw.	City Light & Power Co.
Colgate	Steele	1,180	14	.....	.....	.....	.....	.....	.....	0.18	-0.62	0.10	20	2.4	3	7	16	8	nw.	O. M. Jensen.
Cooperstown	Griggs	1,428	51	23.6	-0.7	53	22	-5	6	0.10	-0.61	0.10	14	1.0	1	6	9	16	nw.	R. J. Lockner.
Courtenay	Stutsman	1,523	17	.....	.....	.....	.....	.....	.....	0.35	-0.49	0.10	14	4.9	8	8	9	14	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	21.4	+1.6	48	22	-2	6	0.18	-0.60	0.05	20	4.0	8	4	9	18	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	47	24.3	-3.0	61	22	-2	6	0.18	-0.65	0.07	20	1.9	7	9	12	10	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	17.9	-3.2	42	22	-16	6	0.19	-0.50	0.10	20	1.9	5	14	7	10	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	24.9	-2.3	65	22	-1	6	0.40	-0.55	0.12	20	4.3	7	7	5	19	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	1,895	67	24.6	+1.9	58	22	0	4	0.48	-0.53	0.29	20	5.2	12	4	10	17	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	56	25.9	-0.1	65	22	3	4	0.27	-0.53	0.09	20†	2.7	4	8	10	13	nw.	Art Waterman.
Fullerton	Dickey	1,439	50	26.0	-1.1	63	22	-1	4†	0.50	-0.56	0.23	20	4.5	7	7	10	14	nw.	F. O. Alin.
Gackle	Logan	1,951	17	23.6	-1.7	59	22	-7	6	0.04	-0.81	0.04	20	0.5	1	7	13	11	nw.	Tony Martin.
Grafton	Walsh	827	56	23.8	+2.1	49	22	-2	4	0.32	-0.38	0.15	14	3.2	3	13	9	9	n.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	23.0	+0.5	52	22	-5	4	0.29	-0.49	0.08	15†	4.2	8	5	11	15	nw.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	7	21.4	.....	50	22	-8	4	0.42	.....	0.12	27-28	7.1	10	5	7	19	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	25.6	-3.0	65	22	3	1	0.34	-0.48	0.22	21	4.4	5	4	12	15	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	54	16.0	-3.2	43	22	-10	6	0.67	-0.05	0.25	9	6.9	4	5	22	4	nw.	A. E. Prior.
Hillsboro	Trail	1,901	42	24.5	-0.8	56	22	-1	4	0.35	-0.41	0.16	18	4.4	6	4	18	9	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	24.8	+0.4	58	22	-1	4†	0.44	-0.46	0.19	20	5.1	5	2	10	19	nw.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	7	24.4	.....	58	22	-2	4	0.34	.....	0.13	17-18	4.0	11	4	9	18	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	23.2	.....	55	22	-6	6	0.28	.....	0.16	17	3.3	5	6	5	20	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	19.7	-0.1	43	22	-10	4	0.57	-0.21	0.20	14	5.3	10	15	8	8	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	55	22.8	+0.1	52	22	-5	4	0.13	-0.68	0.09	19	1.5	2	4	6	21	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	26.2	-1.1	60	22	-2	4	0.25	-0.48	0.16	20	2.7	5	6	6	20	nw.	J. O. Halverson.
Mayville	Trail	975	52	24.8	+0.1	55	22	-2	4	0.21	-0.48	0.06	14	2.7	9	8	17	6	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	25	21.4	-1.6	52	22	-8	6	0.14	-0.55	0.03	23	0.9	9	5	12	14	n.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	36	26.2	-1.6	62	22	0	15	0.37	-0.41	0.30	20	5.0	3	10	11	10	n.	J. G. Carlson.
Oakes	Dickey	1,318	19	24.8	-2.9	66	22	2	6	0.33	-0.47	0.15	18	4.4	5	9	11	11	n.	C. M. Hagen.
Park River	Walsh	998	44	21.7	-1.1	48	22	0	6	0.15	-0.51	0.05	20	2.2	6	12	8	11	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	19.6	+1.2	48	22	-5	5	0.22	-0.58	0.06	28	2.7	9	5	11	15	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	20.0	.....	47	22	-9	4	0.10	-0.63	0.06	20	1.5	2	12	11	8	nw.	T. C. Overland.
Sharon	Steele	1,516	24	22.8	-1.4	51	22	-5	4	0.25	-0.37	0.09	20	3.3	10	8	7	16	nw.	Hugh Lyon.
Valley City	Barnes	1,229	43	26.2	-0.1	58	22	2	1†	0.45	-0.34	0.17	20	7.0	7	8	11	12	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	27.2	-0.4	63	22	5	5†	0.40	-0.32	0.13	20	3.0	9	6	17	8	nw.	State School of Science.
Average for Eastern Division				23.3	-0.9	56	22	-16	6	0.31	-0.52	0.30	20	3.6	6	8	10	13	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	23.8	-1.1	60	22	-3	6†	0.23	-0.60	0.07	21	2.8	8	7	10	14	nw.	Eddie H. Glur.
Belcourt	Rolette	1,960	3	18.4	.....	46	22	-22	6	0.27	.....	0.05	20	3.4	9	8	11	12	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	20.1	-2.4	42	28†	-16	6	0.56	-0.15	0.17	12	8.0	5	9	7	15	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	25.6	+0.4	61	22	-6	6	0.18	-0.69	0.07	19	3.1	5	1	8	22	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	8	25.6	+3.7	61	22	-6	6	0.21	-0.68	0.09	16-17	2.6	6	1	8	22	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	18.6	-2.2	42	30	-21	6	0.34	-0.33	0.15	19-20	4.3	6	7	16	8	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	22.8	-3.6	52	22	-11	6	0.41	-0.41	0.25	20	3.7	3	7	8	16	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	36	24.4	-2.6	60	22	-12	6	0.28	-0.58	0.08	15-16	5.0	5	3	15	13	nw.	J. W. Evens.
Center	Oliver	2,100	10	23.4	.....	55	22	-17	6	0.46	.....	0.15	16	4.9	7	6	15	10	nw.	Fred L. Helnz.
Drake	McHenry	1,634	18	19.6	-5.1	49	22	-13	6	0.31	-0.39	0.12	19	3.7	9	19	9	3	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	52	18.6	-1.9	46	23	-14	6	0.09	-0.53	0.05	20	1.2	2	6	16	9	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	42	18.0	-5.0	44	31	-21	6	0.19	-0.37	0.05	5†	2.4	7	10	15	6	nw.	E. R. Sherman.
Fessenden	Wells	1,610	36	22.2	-1.5	51	22	-11	6	0.24	-0.51	0.11	27-28	4.5	3	17	7	7	n.	John V. Zuber.
Fort Yates	Sioux	1,670	48	27.0	-0.2	66	22	-6	6	0.25	-0.56	0.14	16	4.1	4	12	7	12	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	27	21.2	-4.2	48	22	-10	6	0.25	-0.47	0.15	16	3.6	5	7	10	14	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	23.4	-1.0	61	22	-10	6	0.40	-0.39	0.11	23	3.8	7	4	9	18	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	41	21.8	-2.6	48	22†	-13	6	0.15	-0.39	0.07	20	1.8	4	18	5	8	nw.	Fred Roble.
Hansboro	Towner	1,597	40	18.4	-2.3	45	22	-10	6	0.20	-0.68	0.16	8	2.7	3	10	12	9	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	.....	.....	.....	.....	0.11	-0.66	0.05	17	1.0	3	6	13	12	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	20.4	.....	48	22	-13	6	0.23	.....	0.23	11	3.0	1	6	17	8	w.	John Dulmage.
Linton	Emmons	1,711	31	27.0	-1.0	65	22	-4	2	0.30	-0.48	0.10	16†	1.8	6	8	5	18	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	33	22.4	-1.9	48	22	-9	6	0.21	-0.43	0.06	9	3.0	5	3	15	13	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	34	24.7	-2.1	60	22	-6	6	0.32	-0.52	0.09	16	4.4	9	3	10	18	nw.	No. Gt. Plains Field Sta.
Max																				

Climatological Data for March 1947—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Epping	Williams	2,224	39	21.4	-5.6	48	22	-16	6	0.34	-0.23	0.15	20	4.5	5	13	11	7	nw.	T. Beachler.
Fairfield, 9 1/2 miles N	Billings	2,650	19	.....	.....	.....	.....	.....	.....	0.46	.....	0.12	23	4.0	6	9	5	17	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N	Billings	2,790	30	22.2	.....	54	22	-10	6	0.69	-0.12	0.15	22-23	8.0	10	5	6	20	nw.	Verne King.
Golva, 1 mile E	Golden Valley	2,781	7	22.6	-5.0	57	22	-16	2	0.36	-0.39	0.06	3†	3.1	11	7	9	15	nw.	Chester K. Puda.
Grenora	Williams	2,114	39	21.2	-1.2	50	22	-16	6	0.12	-0.56	0.07	19-20	1.7	3	10	18	3	n.	L. D. Nielson.
Halliday	Dunn	2,073	6	.....	.....	.....	.....	.....	.....	0.29	.....	0.09	16	5.5	6	10	12	9	nw.	John Kisse.
Hettinger	Adams	2,675	41	22.5	-6.4	55	22	-21	2†	0.45	-0.21	0.15	16	6.4	6	14	7	10	nw.	Edgar Martin.
Kenmare	Ward	1,799	16	20.4	-2.8	48	22	-9	6	0.41	-0.24	0.10	19	5.5	9	6	10	15	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	23.0	-5.8	57	22	-12	2†	0.86	+0.13	0.18	3	10.5	8	7	7	17	nw.	S. P. Grane.
Medora, 1 1/2 mi. W	Billings	2,271	33	24.4	-4.0	59	22	-20	6	0.46	-0.30	0.17	18	5.9	8	18	3	10	w.	Harry Roberts.
Mott	Hettinger	2,424	41	23.6	-4.0	59	22	-15	6	0.61	-0.25	0.20	16	5.7	11	8	10	13	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	22.6	-3.5	57	22	-15	6	0.80	-0.01	0.22	16	8.4	12	6	15	10	nw.	Alfred Hasel.
New Hradec, 1 mile E	Dunn	.....	6	22.9	.....	53	22	-18	6	0.60	.....	0.12	16†	4.8	8	6	11	14	nw.	Peter F. Fleck.
Parshall	Mountrail	1,929	33	22.6	-2.7	52	22	-18	6	0.41	-0.17	0.15	16	5.7	8	3	21	7	nw.	C. E. Shubert.
Portal	Burke	1,954	34	15.8	-2.6	48	22	-18	6	0.46	-0.15	0.16	3-4	6.8	4	13	8	10	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	43	18.5	-7.0	47	22	-17	6	0.50	-0.20	0.20	16	5.0	4	3	18	10	nw.	E. J. Lewis.
Richardton, 1 1/2 miles N	Stark	2,467	32	23.2	-4.0	56	22	-13	6	0.41	-0.31	0.20	15-16	5.0	5	5	13	13	nw.	Assumption Abbey.
Ryder	Ward	2,108	19	.....	.....	.....	.....	.....	.....	0.25	-0.29	0.12	20	3.1	6	9	5	17	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	20.8	-4.0	54	22	-16	6	0.58	0.00	0.17	16†	6.3	6	10	11	10	w.	H. J. Bugge.
Stanley	Mountrail	2,258	10	17.2	.....	45	22	-18	6	0.44	.....	0.18	16	6.0	4	13	9	9	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	19	.....	.....	.....	.....	.....	.....	0.29	-0.33	0.11	7-8	3.8	7	7	16	8	nw.	Geo. N. Pilgard.
Toga	Williams	2,279	19	.....	.....	.....	.....	.....	.....	0.40	-0.23	0.25	20	4.7	2	6	13	12	sw.	L. A. Simon.
Trotters	Golden Valley	.....	22	.....	.....	.....	.....	.....	.....	0.38	-0.39	0.10	22	6.9	9	1	21	9	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	23.2	.....	54	22	-12	6	0.48	.....	0.18	16	6.5	7	13	8	10	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	35	23.4	-2.8	56	22	-17	6	0.28	-0.41	0.07	16	2.6	6	2	19	6	nw.	J. C. Zeller.
Wildrose	Williams	2,258	18	.....	.....	.....	.....	.....	.....	0.37	-0.25	0.14	16	4.6	7	.....	.....	.....	.....	Jonathan Winkler.
Williston	Williams	1,878	69	22.7	-0.2	51	22	-13	6	0.34	-0.35	0.15	15-16	4.0	9	5	7	19	nw.	U. S. Weather Bureau.
Average for Western Division				21.5	-4.3	59	22	-21	2†	0.43	-0.33	0.25	20	5.3	7	8	11	12	nw.	
Average for the State				22.3	-1.7	66	22	-23	6	0.34	-0.45	0.60	23	4.1	6	8	11	12	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
‡ And other dates.
§ Best available used for stations not equipped with recorders.

Daily Temperatures for March 1947																																		
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum... 18	19	27	24	20	21	33	33	37	34	35	38	30	12	32	30	37	31	40	38	43	60	38	41	28	38	44	54	40	48	46	34.5		
	Minimum... 4	4	-2	-2	-2	-3	-3	2	15	30	29	29	18	6	2	2	8	19	20	24	17	17	32	26	14	8	9	18	18	18	25	13.2		
Bismarck Airport	Maximum... 23	22	26	24	18	17	25	29	40	37	33	33	29	21	31	30	36	30	31	37	51	61	42	39	31	43	44	53	40	47	47	34.5		
	Minimum... 5	-3	10	-1	0	-6	6	12	24	32	29	23	10	5	23	24	19	22	24	21	34	28	24	15	14	22	21	22	26	29	16.7			
Bottineau	Maximum... 20	19	18	18	19	10	20	21	31	34	36	36	24	15	20	30	32	28	33	31	36	40	40	35	25	38	39	40	38	42	40	29.3		
	Minimum... -2	1	0	-12	4	-21	-7	2	10	24	27	19	-8	-1	-8	3	5	13	20	18	-1	23	26	21	6	5	23	10	11	14	24	8.0		
Carson	Maximum... 18	24	27	25	13	14	23	24	35	35	35	30	29	20	30	30	35	30	30	37	49	60	45	35	40	42	40	52	41	49	45	33.6		
	Minimum... 7	-8	10	-5	-9	-12	8	14	31	30	20	20	11	1	1	20	23	15	20	23	19	35	32	19	15	26	27	22	16	23	26	15.2		
Crosby	Maximum... 14	19	10	9	5	11	14	24	32	37	26	22	14	13	31	27	32	30	30	30	41	44	38	28	26	41	34	39	37	42	38	27.0		
	Minimum... -6	-8	-2	-5	-10	-15	-12	-7	7	15	19	12	4	-6	-6	-1	12	4	9	11	10	20	27	25	14	15	20	22	15	20	24	6.9		
Devils Lake	Maximum... 16	18	20	18	19	12	20	26	36	35	34	32	19	18	24	26	30	31	29	33	38	48	40	30	22	35	36	44	34	44	46	29.5		
	Minimum... 2	10	-2	-5	-2	-7	-4	6	22	28	31	15	3	5	4	15	12	10	23	22	14	35	30	14	10	13	26	20	14	19	24	13.3		
Dickinson Airport	Maximum... 14	18	21	13	7	9	19	23	32	33	30	27	24	17	29	31	33	24	29	32	44	56	37	33	28	39	38	47	37	45	40	29.6		
	Minimum... -5	-10	9	-4	-13	-6	5	16	22	28	22	14	3	-2	-4	23	21	15	19	22	18	35	28	25	20	20	27	28	18	23	28	14.0		
Dunn Center	Maximum... 21	21	20	16	11	12	23	25	34	37	35	28	25	19	33	30	38	31	32	33	48	56	49	38	31	42	40	48	39	46	40	32.3		
	Minimum... 1	-6	12	-8	-7	-17	-3	11	21	29	23	21	8	0	4	22	24	16	22	26	21	35	32	27	17	17	25	24	17	24	28	4.8		
Fargo Airport	Maximum... 17	19	21	19	22	20	25	29	34	40	35	35	26	15	25	27	34	35	34	34	35	58	42	37	24	34	41	50	37	44	48	32.1		
	Minimum... 8	4	9	0	3	2	8	17	21	31	32	26	12	8	13	13	23	26	27	15	32	32	20	13	14	28	22	16	22	28	17.2			
Fessenden	Maximum... 18	20	22	19	17	12	22	20	30	35	35	34	23	15	25	32	34	32	30	33	41	51	44	36	27	40	37	45	37	44	46	30.8		
	Minimum... 10	5	2	-3	4	-11	-5	-1	11	20	28	21	5	3	-1	14	10	21	25	23	18	35	32	25	13	12	28	19	16	21	24	13.7		
Fullerton	Maximum... 20	19	24	24	25	23	28	30	38	36	37	36	33	22	27	32	33	32	36	36	42	63	50	40	32	38	44	51	40	46	44	34.9		
	Minimum... 7	8	5	1	8	1	6	14	20	29	32	32	14	6	13	7	24	24	26	21	29	35	28	15	13	23	19	17	28	22	17.2			
Garrison	Maximum... 20	24	25	22	13	17	22	27	36	36	33	30	24	17	31	35	37	28	33	35	48	61	42	33	29	42	38	46	38	47	39	32.8		
	Minimum... 0	-1	5	-2	-5	-10	-2	9	20	31	26	19	5	1	1	23	20	19	18	20	15	31	30	25	13	15	22	21	16	23	26	14.1		
Golva	Maximum... 12	17	18	18	8	10	16	25	31	38	34	24	22	11	30	33	30	34	30	34	49	57	41	36	38	41	40	44	48	46	44	30.9		
	Minimum... -6	-16	6	-1	-13	-14	7	14	20	27	20	9	5	-9	-4	23	4	24	15	20	25	40	31	30	30	20	24	30	32	24	28	14.0		
Grafton	Maximum... 19	21	21	21	22	23	25	29	34	36	36	37	28	17	25	28	34	32	32	33	44	49	47	43	28	34	39	41	40	44	47	32.2		
	Minimum... 8	11	7	-2	6	0	5	14	19	24	32	26	9	7	6	12	9	10	25	25	8	32	35	26	13	10	26	21	15	19	24	15.5		
Grand Forks Airport	Maximum... 18	21	20	17	20	19	22	33	34	36	34	32	22	16	25	32	29	31	33	34	50	42	34	23	33	40	43	36	42	46	40	30.0		
	Minimum... 7	7	-4	-8	-5	-6	-3	3	19	27	31	21	10	7	5	11	10	6	22	23	10	32	30	16	12	9	24	15	14	19	24	12.2		
Jamestown Airport	Maximum... 19	19	25	22	24	21	26	28	36	36	35	34	26	18	26	31	32	34	34	36	41	58	41	36	27	40	41	49	39	46	47	33.3		
	Minimum... 4	8	5	-2	3	0	0	13	22	36	31	20	10	6	5	15	9	24	23	20	35	30	21	14	12	24	19	15	22	26	15	24.0		
Kenmare	Maximum... 19	19	22	17	9	16	12	28	36	36	31	25	20	11	32	30	34	26	33	33	43	48	42	31	28	44	35	43	41	43	43	29.9		
	Minimum... -5	-4	5	-4	-5	-9	-4	-2	9	27	22	15	4	-3	-1	1	21	15	18	20	12	23	30	28	14	14	20	20	15	17	24	8.8		
Langdon	Maximum... 20	25	23	22	28	25	26	25	30	33	34	33	29	19	27	30	29	32	35	37	33	43	41	33	24	32	35	39	38	40	39	30.0		
	Minimum... -1	5	-1	-10	-4	-9	-8	6	12	16	19	29	23	-7	-2	-5	4	1	10	18	15	2	27	30	22	5	2	24	12	9	14	21	8.8	
Marmarth	Maximum... 15	19	21	18	9	9	18	25	31	36	34	30	28	17	33	35	36	33	33	36	50	57	45	37	30	40	42	51	42	47	47	32.0		
	Minimum... -4	-12	8	-2	-11	-12	2	14	17	26	24	18	2	-10	-3	16	24	13	16	20	14	31	30	25	20	20	23	25	29	30	30	13.8		
Minot Airport	Maximum... 15	19	16	16	10	12	16	21	34	36	34	28	17	16	29	28	33	28	29	32	43	47	40	33	26	41	35	44	37	44	45	29.0		
	Minimum... -2	2	4	-3	-6	-10	-2	7	20	29	24	10	3	-1	1	22	19	18	19	23	13	34	30	18	13	14	20	19	16	20	22	12.2		
Mott	Maximum... 17	21	26	21	15	13	22	25	34	36	36	30	27	22	32	34	36	34	29	35	48	59	44	37	35	42	43	52	46	50	47	33.3		
	Minimum... 5	-14	10	-5	-11	-15	7	16	20	22	24	20	5	-4	-4	13	19	11	19	15	19	33	31	25	21	19	26	20	16	24	27	18.0		
Pembina Airport	Maximum... 16	18	18	19	19	19	22	29	32	35	35	32	15	15	23	24	30	30	29	30	33	48	42	36	21	32	35	36	32	39	42	28.8		
	Minimum... 7	5	-1	-3	-5	-2	2	9	15	16	31	10	2	6	1	0	7	1	6	19	17	7	26	32	14	11	10	24	18	9	20	10	10.8	
Sharon	Maximum... 22	23	25	23	26	20	26	26	33	36	35	33	25	18	26	27	29	31	30	33	36	51	43	42	25	35	38	45	35	43	46	31.8		
	Minimum... 5	12	4	-5	2	0	-4	0	13	25	30	25	6	4	1	10	7	17	22	24	15	33	33	24	8	9	29	20	14	19	23	13.2		
Steele	Maximum... 18	21	27	21	22	25	32	37	35	33	35	27	11	27	31	34	31	33	35	44	57	49	35	26	39	41	48	35	44	49	33.8			
	Minimum... 4	0	-4	-5	6	-10	3	6	20	30	28	25	14	3	2	18	14	18	18	23	13	33	31	25	12	9	23	16	16	20	24	14.4		
Valley City	Maximum... 19	20	25	22	25	25	25	27	37	38	37	36	33	22	26	28	33	33	33	36	40	58	55	38	33	37	40	49	46	45	47	34.5		
	Minimum... 2	12	10	3	8	2	6	16	22	27	31	33	16	6	4	13	14	25	26	20	33	35	30	11	13	29	21	16	20	26	17.9			
Wahpeton	Maximum... 20	21	25	23	26	25	29	30	36	41	37	37	34	24	25	29	35	35	35	36	37	63	57	40	33	35	43	52	46	41	44	35.5		
	Minimum... 8	9	12	6	5	5	10	21	22	30	31	32	18	6	9	18	10	24	28	25	19	32	33	29	13	26	24	16	25	29	19.0			
Williston	Maximum... 20	18																																

Daily Precipitation for March 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James	T.	T.			.03			T.	.07		.02	T.		T.	.02	T.		.07		T.		T.	.02	T.	.02					.02			0.27
Casselton	Red.	T.	.02	T.		T.			T.	.02		.08			T.	.10	T.		.08		T.		T.	.22		T.	.01	T.						0.53
Cooperstown	Sheyenne	T.	T.	T.					T.	T.					T.	.10	T.		.01		T.		T.	.07		T.	T.							0.10
Courtenay	James	T.	T.	.02					T.	T.		.02	.02		T.	.01	T.		.04		T.		T.	.05		.02	.01	T.						0.55
Devils Lake ^{1 5}	Devils Lake	T.	T.	T.		T.			T.	T.		.02	.02		T.	.01	T.		.01		T.		T.	.07		T.								0.18
Edgeley	James	T.	T.	T.					T.	T.					T.	.01	T.		.02		T.		T.	.10		.03	.02	T.						0.18
Edmore	Devils Lake	T.	.05			T.	T.	T.	T.						T.	.01			.02		T.		T.	.10		T.	T.							0.19
Ellendale	James	T.	.01	.01		T.			T.	T.		.02	T.		T.	.05	T.		.10		.09	.02	.12		.04	.01	T.						.02	0.40
Fargo ^{1 5}	Red.	.01	.01	T.	T.	T.	T.	T.		.02	T.	T.	.02	T.	.01	.05	T.		.03	.01	T.	.29	T.		.01	.01	T.			T.			.01	0.48
Forman	Sheyenne														T.	.06						.09		T.									.03	0.27
Fullerton	James	T.	T.	T.		.01	T.	T.	T.						T.	.03		.04		.11		.23		.06	T.	T.		.02		T.			T.	0.50
Gackle	do														T.	.03						.04												0.04
Grafton	Red.	T.	.04						T.	T.					T.	.15						.13			T.	T.	T.		T.					0.32
Grand Forks Airport ³	do	T.	.01	.04	.02	T.	T.		T.	T.		T.	T.	.04	.01	.05	T.		.08		T.	T.	.05		T.	T.	T.		.09	.03				0.42
Hankinson ²	do	T.	T.	T.					T.	T.		.04			T.	T.							.22		T.	T.	T.		.02					0.34
Hannah	Pembina	T.	.13						T.	T.		.25			T.	.15							.14			T.	T.							0.67
Hillsboro	Red.	.01	T.			T.			T.	T.		T.	.05	.01	T.	.01	.01		.09		.16		.08		.10	T.			.03	T.	T.	T.		0.35
Jamestown Airport ³	James	T.	T.	.02	T.	T.		.01	T.	.01		T.	.01	T.	.01	.01		.01	.09		.04	T.	.10	T.			T.							0.34
Langdon	Pembina	.01	.02	.02								.01	.17	.05		.20					.02		.06		T.	T.			T.		.01			0.57
Larimore	Red.														.04						.09													0.13
Lisbon	Sheyenne								T.	T.		.02			.03							.16		.02										0.25
Mayville	Red.	.02	T.	.03	T.	T.		.01	T.	T.		.02			.01	.06			.02		.03		.03		.01									0.21
McHenry	James	T.	T.	.02		.01			.01	.01			.01	T.	.02			.01	T.	T.		.30				.03	T.							0.14
McLeod	Sheyenne	T.	T.									.03										.15		.11										0.37
Oakes ²	James	T.	T.	.02	T.				T.	T.						.01					.15		.11			.02								0.33
Park River	Red.	T.	T.	.02	T.				T.	T.		T.	.01	.01	.03				.03			.05		T.		T.		T.						0.15
Pembina Airport ³	do	T.	.04	T.	T.	.01			T.	.03	T.	T.	T.	.03	.01	.01			T.	T.		.02		T.	T.	T.		T.		.01	.06			0.22
Petersburg	do	T.	T.	T.					T.	T.												.06		T.		T.								0.10
Sharon	do	.01	.01	.04		.01			T.	T.		T.	.02	.01	T.	.04			.01		T.	.09			T.	T.	.01							0.25
Valley City	Sheyenne	T.	T.					.12					T.	T.	T.	.04	.04			.01		.17		.05	T.				.02					0.45
Wahpeton	Red.	T.	T.	T.				T.	.01				.12			.02				.03		.13	.02	.03		T.		.01				.03		0.40
Middle Division																																		
Ashley ³	Missouri		T.			.01	T.	.02					T.			.01			.05	.02	T.		.07		.03				.02					0.23
Bisbee	Devils Lake			.05					T.	.07			.14	.17	T.	T.		.07	.04		T.		.13		T.				.03	T.	T.			0.56
Bismarck Airport ^{1 5}	Missouri	T.	T.	.01	T.	T.		T.	T.			T.	T.	T.	T.	T.		.07	.04		T.		.05	.01	T.				.03	T.	T.			0.21
Bottineau ²	Mouse		T.	.04	T.				T.	.08					T.	T.		.03	.02		T.		.15						.02					0.34
Butte	do		T.			.10			T.	T.					T.	T.			T.		T.		.25						T.					0.41
Carson	Heart		.07	.05				.04	.04							.08						.14		T.										0.28
Center	Missouri		.02	.01			T.	.01	.03							.15					T.	.14		T.					.10					0.46
Drake ²	Mouse		.01			.10		.02	T.				T.			.02	.01		.01		.12													0.31
Dunseith	do		T.					T.	T.	T.		T.	T.								.04		.05											0.09
Eckman	do			.01		.05		.02	.02	.02						.05					.02													0.19
Fessenden	James												T.	.04					.09									T.	.11					0.24
Fort Yates	Missouri		.06					T.	.04							.14					T.	T.		T.	.01									0.25
Foxholm	Mouse	T.	.02			.04		T.	.03							.15						.01												0.25
Garrison ³	Missouri		T.	T.	.06			.02	.03							.07					.04	.07		.11					T.					0.40
Granville	Mouse		T.	T.	.04			.02	.02	T.						T.						.07												0.15
Hansboro	Devils Lake		.02	T.				.02	.16	T.			.02	T.	T.						T.		T.					T.						0.20
Litton	Missouri					.01										.02					.10	T.	T.	.06	T.		.10			.01				0.30
Maddock	Sheyenne	T.	T.			.05		T.	.06			T.	.03			T.		.04		T.		.03		T.		T.								0.21
Mandan ²	Missouri		.02	T.	.04		.02	T.	T.	T.		T.	T.		T.		.09	.03		.01	.06		T.		.01	T.			.04	T.				0.32
Max ²	do		.06	.02		.01		T.								.04						.16	T.											0.14
McClusky	do		T.			.10		T.								T.						.16	T.											0.26
Minot Airport ³	Mouse	T.	T.	.01	.01	.05	T.	T.	.02	T.			.01	T.			.07	T.		T.		.01	.04		T.		T.		T.					0.18
Mohall	do		T.			.10		T.	.12								.03	T.																0.33
Napoleon	Missouri		.01	T.	.01	T.		T.					T.	T.		T.		.03	T.		.01	.01	.03		.03				.01					0.14
New Salem	Heart		.03	.02	T.	T.		.01	.01																									

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Nat. Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

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NORTH DAKOTA SECTION

F. J. BAVENDICK

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GENERAL SUMMARY

Snowfall this month was more than twice the normal. Falls were very light in the northern tier of counties, but many stations over other parts of the state had more than 10 inches. There were record 24 hour snowfalls during the storm on the 4th and 5th. Williston reported 10.6 inches, which is the greatest amount for any 24 hour period on record since that station was established. Visibility was poor and by the afternoon of the 5th, many highways were blocked. Temperatures were below normal and precipitation averaged near normal. It was unevenly distributed with three inches or more in the Red River Valley, while amounts were below normal at many reporting stations in the northwest, north-central and central counties. The heavy wet snow resulted in water-logged fields and flooding of ditches and rivers in the east portion of the state. The snow-melt, added to the spring rise of the Red and Sheyenne Rivers, resulted in flooding and in the case of the Sheyenne, in overflow of many sections of farm land. At Fargo, a few homes were affected by the flood and at Grand Forks possibly about 100 homes were evacuated because of the unusually high water. Damage was estimated at \$500,000. The month was cloudy with sunshine 13% below normal, except for the northwest where near normal conditions prevailed. The wet, cool and cloudy conditions combined to delay farm work. By the close of the month, plowing and seeding of spring wheat where more than half completed over the southwest and work over the balance of the state was well started. Pastures were greening at the close of the month, but afforded little feed and the lateness of the season was of some concern to stockmen.—M.S.C.

TEMPERATURE

The mean temperature for the state was 39.9°, or 1.7° below the 1892-1947 average for April. The mean temperature for the eastern division was 39.8°; for the middle division, 39.9°; and for the western division, 40.5°. The highest mean temperature was 43.4° at Medora, and the lowest, 35.5° at Hannah, making a range in mean temperature of 7.9°. The absolute range was 90°, from 90° at Towner on the 28th, to 0° at Golvea on the 8th. The average daily excess in temperature for the state since January 1, 1947, is 1.1°.

PRECIPITATION

The average precipitation for the state was 1.48 inch, or 0.06 inch more than the 1892-1947 average for April. In the eastern division the average amount was 1.84 inches; in the middle division, 1.23 inches; and in the western division, 1.36 inches. The greatest monthly amount reported was 4.11 inches at Casselton; the least was 0.37 inch at Hansboro. The greatest amount recorded in any 24 consecutive hours was 1.56 inches at Hillsboro on the 4-5th. The accumulated deficiency in precipitation for the state since January 1, 1947, is 0.57 inch. The average snowfall was 6.8 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes in inches)			Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Bismarck.....	30.48	7	29.43	30	11.3	36	nw.	26	80	87	64	59	40
Devils Lake...	30.48	12	29.42	30	9.7	34	ne.	5	...	83	58	57	48
Fargo.....	30.48	7	29.26	5	13.1	41	n.	5	84	90	71	71	47
Williston.....	30.50	7	29.38	30	8.1	28	nw.	30	77	84	57	50	61

† And other dates.

COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	37.6	75	-2	2.58	3.09	2.29	2.65	6.3	7	10	6	14	
1893...	34.3	77	-8	2.45	1.56	1.09	1.70	7.8	6	7	9	12	
1894...	42.8	92	12	3.66	2.93	2.50	3.03	4.4	9	8	10	8	
1895...	49.6	87	10	2.10	2.38	2.20	2.23	0.0	9	13	8	9	
1896...	40.1	92	2	5.50	3.73	2.18	3.80	5.1	9	9	8	13	
1897...	40.8	93	7	0.80	1.20	1.24	1.08	1.1	9	12	9	10	
1898...	41.9	87	4	1.38	1.36	1.40	1.38	0.5	14	9	7	8	
1899...	38.0	86	-22	1.46	1.31	1.31	1.36	6.3	6	12	10	8	
1900...	49.3	93	11	0.75	0.75	1.05	0.85	T.	3	20	6	4	
1901...	44.5	92	10	1.40	0.72	0.82	0.98	0.3	4	12	9	9	
1902...	40.2	87	-2	1.35	0.88	0.95	1.06	2.9	3	12	8	10	
1903...	42.5	83	8	1.67	1.10	0.92	1.23	2.7	3	16	6	8	
1904...	37.4	91	2	2.22	1.21	0.72	1.38	8.1	3	13	5	12	
1905...	40.2	83	3	1.04	0.38	0.11	0.51	3.7	3	15	8	7	
1906...	46.7	88	8	1.96	1.06	1.48	1.50	1.3	5	14	7	9	
1907...	31.9	80	-6	0.77	0.36	0.44	0.52	4.2	4	10	9	11	
1908...	43.9	91	-19	1.12	1.53	1.91	1.52	5.9	5	16	6	8	
1909...	34.2	80	3	0.95	0.71	0.64	0.77	5.1	6	10	9	11	
1910...	48.0	96	4	1.52	1.03	1.56	1.37	2.9	4	16	8	6	
1911...	41.5	90	-5	2.12	0.80	0.64	1.19	6.3	5	15	6	9	
1912...	44.4	88	2	2.61	2.32	2.22	2.35	1.7	7	14	8	8	
1913...	46.8	94	11	1.00	0.70	0.23	0.64	2.4	4	16	6	8	
1914...	40.9	84	2	2.49	1.31	0.58	1.46	2.8	6	9	10	11	
1915...	50.3	99	5	1.42	0.98	0.68	1.03	T.	5	15	8	7	
1916...	39.2	79	-6	1.70	1.07	1.54	1.44	2.9	5	10	10	10	
1917...	37.2	73	5	1.89	1.67	1.49	1.68	5.6	7	9	9	12	
1918...	41.4	81	0	2.38	1.87	2.28	2.18	3.0	7	12	8	10	
1919...	42.3	79	6	1.45	1.40	1.72	1.52	6.2	6	11	9	10	
1920...	32.1	63	-11	0.73	0.67	1.12	0.84	2.1	5	13	8	9	
1921...	41.1	91	1	1.84	2.07	1.40	1.77	3.8	7	14	7	9	
1922...	42.3	89	-2	1.17	0.79	0.79	0.92	2.3	6	10	9	11	
1923...	38.7	89	-15	1.22	1.63	1.51	1.45	7.2	5	13	8	9	
1924...	39.3	84	6	3.94	2.31	1.35	2.53	7.5	9	8	9	13	
1925...	47.8	85	10	2.21	1.37	1.22	1.60	T.	6	11	10	9	
1926...	42.8	98	-4	0.17	0.34	0.32	0.28	0.9	3	17	8	5	
1927...	41.4	95	7	2.05	1.46	1.67	1.73	2.3	7	10	8	12	
1928...	35.9	84	-6	0.92	0.88	0.92	0.91	5.0	5	12	10	8	
1929...	41.5	85	-9	1.68	1.36	0.88	1.31	3.4	6	12	9	9	
1930...	47.3	86	8	1.16	1.14	1.45	1.25	0.5	6	14	7	9	
1931...	44.1	87	3	0.75	0.37	0.18	0.43	0.7	2	18	8	4	
1932...	44.1	79	0	2.50	2.09	1.84	2.14	0.7	8	9	9	12	
1933...	40.0	84	2	1.44	1.20	1.35	1.33	7.3	5	11	9	10	
1934...	43.7	95	7	0.75	0.34	0.24	0.44	1.9	3	15	8	7	
1935...	38.4	83	0	2.62	1.75	1.42	1.93	3.6	8	9	9	12	
1936...	35.6	87	-15	0.53	0.26	0.37	0.39	0.5	4	14	10	6	
1937...	40.7	79	2	3.44	1.56	1.06	2.02	5.8	8	8	9	13	
1938...	42.8	90	1	1.68	0.96	0.64	1.09	0.1	5	11	10	9	
1939...	41.6	90	-1	0.93	0.66	1.03	0.87	0.8	6	12	9	9	
1940...	37.8	78	-9	1.84	2.36	2.45	2.22	4.1	8	7	10	13	
1941...	44.1	82	6	3.05	2.13	1.71	2.30	1.6	13	6	9	15	
1942...	44.9	90	-6	2.12	1.75	2.01	1.96	3.3	7	11	9	10	
1943...	44.9	83	11	1.46	1.56	1.42	1.48	0.1	5	15	10	5	
1944...	40.8	77	-11	0.74	0.83	0.84	0.80	0.2	4	14	7	9	
1945...	38.0	80	6	1.52	0.82	0.97	1.10	4.5	6	7	12	11	
1946...	48.2	87	9	0.96	0.58	0.48	0.67	2.4	4	14	11	5	
1947...	39.9	90	0	1.84	1.23	1.36	1.48	6.8	8	8	11	11	
Period	41.6	99	-22	1.73	1.32	1.22	1.42	3.2	6	12	9	9	

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Climatological Data for April 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	39.6	.....	89	28	12	19	1.54	.....	0.50	4-5	7.0	12	18	5	7	nw.	Albert Thoren.
Carrington	Foster	1,579	50	39.1	-0.5	83	28	14	6	0.69	-0.64	0.28	4-5	6.0	8	4	8	18	nw.	Soo Line Agent.
Casselton	Cass	934	52	40.0	-1.6	82	28	14	7	4.11	+2.36	1.46	5-6	8.0	11	6	15	9	n.	Ashton Lockhart.
Cavalier	Pembina	894	40	39.4	+0.2	88	28	17	7	0.68	-0.71	0.21	14	1.0	9	5	12	13	n.	City Light & Power Co.
Colgate	Steele	1,180	14	.....	.....	.....	.....	.....	.....	2.10	+0.44	0.75	4	5.2	6	6	15	9	e.	O. M. Jensen.
Cooperstown	Griggs	1,423	51	39.6	-0.7	84	28	18	6	1.32	-0.07	0.33	6	7.0	7	6	9	15	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	17	.....	.....	.....	.....	.....	.....	0.92	-0.51	0.20	5	1.9	9	1	20	9	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	39.6	+0.8	85	28	16	6	0.70	-0.82	0.17	16-17	3.1	10	6	8	16	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	47	38.7	-3.9	87	29	12	8	1.85	+0.10	0.45	4	6.5	11	8	10	12	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	37.0	-2.3	88	29	13	6	0.74	-0.52	0.26	23	0.5	5	15	6	8	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	38.8	-3.9	79	29	16	6	2.82	+0.96	0.81	5	14.1	9	3	12	15	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	39.5	-1.1	82	28	18	7	3.69	+1.51	1.25	4-5	7.5	11	5	9	16	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	56	40.6	-3.4	79	29	17	6	2.29	+0.28	0.74	10	5.4	10	9	9	12	se.	Art Waterman.
Fullerton	Dickey	1,439	50	40.2	-2.5	79	28	17	6	2.56	+0.72	1.23	5-6	13.1	9	3	13	14	s.	F. O. Alin.
Gackle	Logan	1,951	17	39.5	-2.6	83	29	11	6	0.61	-0.93	0.22	4	3.6	7	1	21	8	nw.	Tony Martin.
Grafton	Walsh	827	56	40.2	-0.4	86	28	18	19	1.05	-0.29	0.27	5	3.1	13	12	8	10	n.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	39.7	-1.6	86	28	22	7	2.34	+0.68	0.67	5	3.0	12	6	10	14	se.	University of N. Dak.
Grand Forks Aprt. 2 1/2 mi. W	Grand Forks	834	7	38.6	.....	84	28	20	7	2.02	.....	0.50	4-5	2.1	12	4	10	16	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	39.4	-4.1	80	28	18	7	3.96	+1.95	0.98	6	10.0	15	6	8	16	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	54	35.5	-2.4	84	28	16	6	0.47	-0.65	0.22	13	T.	3	7	18	5	nw.	A. E. Prior.
Hillsboro	Trall	901	42	40.0	-2.2	82	28	12	8	3.32	+1.44	1.56	4-5	12.0	10	7	16	7	nw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	40.6	-1.1	82	28	17	6	1.45	-0.25	0.42	4-5	4.2	6	4	13	13	sw.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	7	39.4	.....	83	28	15	7	1.88	.....	0.87	4-5	7.4	11	2	10	18	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	39.2	.....	85	28	12	6	0.62	.....	0.18	4	4.0	5	4	10	16	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	38.4	+0.8	85	28	12	6	0.48	-0.75	0.16	13	1.5	7	6	11	13	nw.	V. Sturlaugson.
Lisbon	Grand Forks	1,134	55	39.2	-1.0	85	28	18	7	1.33	-0.27	0.40	5	2.3	9	4	7	19	n.	Jesse P. Phillips.
Mayville	Ransom	1,091	44	38.6	-3.5	79	28	13	7	3.05	+1.12	0.96	6	7.0	11	9	6	15	nw.	J. O. Halverson.
McHenry, 6 miles NNE	Eddy	1,509	25	38.5	-2.1	84	28	15	6	0.96	-0.41	0.19	4-5	4.0	12	7	8	15	ne.	H. A. Ragaz.
McLeod, 3 miles E.	Richland	1,075	36	39.2	-4.4	80	28	15	7	3.03	+1.04	1.01	5-6	9.2	8	13	7	10	n.	C. E. Blasky.
Munich, 3 1/2 miles SW	Cavalier	1,598	.....	.....	.....	.....	.....	.....	.....	0.58	.....	0.17	3	0.6	9	9	13	8	nw.	Harold Feldner
Oakes	Dickey	1,318	19	39.8	-3.0	82	29	17	6	2.25	+0.38	0.49	5	4.5	13	9	11	10	n.	C. M. Hagen.
Park River	Walsh	998	44	38.8	-1.7	86	28	11	6	0.83	-0.49	0.21	13	1.2	8	12	10	8	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	37.4	-1.1	87	28	17	19	0.78	-0.48	0.27	30	0.2	10	5	12	13	n.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	37.9	.....	82	28	16	6	1.02	-0.37	0.25	30	2.3	9	7	15	8	n.	T. C. Overland.
Sharon	Steele	1,516	24	39.3	-0.3	85	28	17	6	2.21	+0.73	0.70	4-5	7.0	14	16	8	6	nw.	Hugh Lyon.
Valley City	Barnes	1,229	43	41.4	-1.0	83	28	19	6	2.18	+0.45	0.60	4-5	5.0	9	8	12	10	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	41.6	-2.6	80	28	20	7	4.01	+1.93	1.26	4-5	10.2	18	10	11	9	nw.	State School of Science.
Average for Eastern Division				39.8	-1.9	89	28	11	6	1.84	+0.11	1.56	4-5	5.3	10	7	11	12	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	39.0	-3.4	81	29	11	7	1.55	-0.06	0.27	3	8.5	12	7	8	15	nw.	Eddie H. Glur.
Belcourt	Rolette	1,960	3	36.4	.....	84	28	9	7	0.83	.....	0.29	3	2.0	7	7	13	10	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	39.8	-0.9	88	28	14	6	0.83	-0.36	0.38	3	2.0	6	14	6	10	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	41.6	-1.5	83	28	17	8	1.00	-0.19	0.37	4-5	12.0	6	4	7	19	nw.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE.	Burleigh	1,650	8	41.4	+1.0	84	28	15	8	0.90	-0.62	0.47	4-5	10.2	8	4	7	19	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	38.8	-0.2	87	28	10	7	1.16	+0.32	0.40	3-4	0.5	12	5	13	12	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	40.4	-0.9	87	28	10	6	1.70	+0.40	1.08	5	11.0	4	7	7	16	nw.	R. L. Williams.
Carson, 2 miles SW	Grant	2,300	36	41.2	-1.3	83	29	13	8	1.76	+0.41	0.65	4	13.0	7	9	11	10	nw.	J. W. Evans.
Center	Oliver	2,100	10	38.8	.....	84	28	9	8	1.57	.....	0.68	4-5	16.0	6	7	17	6	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	39.5	-0.9	86	28	10	6	1.01	-0.16	0.54	3	4.0	6	14	11	5	s.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	52	38.6	-0.9	85	28	10	6	0.94	+0.10	0.38	3	0.5	8	3	10	17	nw.	State Tuberculosis San
Eckman	Bottineau	1,500	42	38.4	-2.0	88	28	8	7	1.51	+0.60	0.55	3	4.2	9	8	11	11	se.	E. R. Sherman.
Fessenden	Wells	1,610	36	40.2	-0.2	86	28	12	6	1.23	-0.09	0.65	5	8.9	7	11	17	2	w.	John V. Zuber.
Fort Yates	Sioux	1,670	48	42.8	-3.0	82	29	17	8	1.53	+0.18	0.50	14	7.5	8	9	7	14	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	27	39.8	-1.0	85	28	11	6	1.12	-0.13	0.51	4-5	6.3	6	8	6	16	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	40.6	-1.5	86	28	13	8	1.89	+0.73	0.93	4-5	11.7	9	5	8	17	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	41	40.0	-0.8	89	28	9	6	1.01	+0.07	0.59	3	4.0	5	16	9	5	nw.	Fred Roble.
Hansboro	Towner	1,597	40	37.7	-0.9	86	28	12	6	0.37	-0.88	0.27	3	0.4	4	3	17	10	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	.....	.....	.....	.....	0.46	-0.82	0.36	3	1.2	3	5	13	12	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	40.0	.....	87	28	13	6	1.01	.....	0.42	4-5	5.0	5	6	16	8	w.	John Dalmage.
Linton	Emmons	1,711	31	42.5	-0.3	86	29	17	8	1.98	+0.70	0.59	5	12.0	10	4	7	19	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	33	40.8	+0.2	86	28	12	6	1.25	+0.13	0.36	3	4.0	8	6	16	8	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	34	41.0	-1.6	84	28	16	8	1.90	+0.62	0.65								

Climatological Data for April 1947-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	55	40.5	−2.5	88	28	9	8	1.63	+0.62	0.50	4-5	7.0	7	11	16	3	nw.	H. W. Case.
Epping	Williams	2,224	39	41.5	−0.2	84	28	2	7	0.83	−0.16	0.47	5	5.5	7	15	6	9	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	19	42.4	.....	84	28	12	8	2.12	+0.90	0.60	14	10.3	7	14	7	9	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	30	42.4	.....	84	28	12	8	2.26	+0.97	0.43	4	10.0	9	6	14	10	uw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	7	40.4	−1.3	82	28	0	8	1.56	+0.38	0.82	4-5	13.5	8	10	10	10	nw.	Chester K. Puda.
Grenora	Williams	2,114	39	41.8	−2.5	84	28	8	7	1.20	+0.17	0.80	4-5	5.0	3	18	9	3	nw.	L. D. Nielson.
Halliday	Dunn	2,073	6	.....	.....	84	28	.....	.....	1.78	.....	0.61	4-5	11.6	5	8	14	8	nw.	John Kisse.
Hettinger	Adams	2,675	41	40.8	−2.1	83	29	3	8	1.22	+0.16	0.74	4	9.8	6	15	4	11	nw.	Edgar Martin.
Kenmare	Ward	1,799	16	40.2	0.0	84	28	9	6	1.11	+0.19	0.61	4-5	7.6	5	8	8	14	w.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	43.2	0.0	84	28	1	8	1.23	+0.16	0.40	4	9.9	8	4	9	17	uw.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	33	43.4	.....	87	28	20	6	1.63	+0.53	0.56	4	9.0	8	12	8	10	w.	Harry Roberts.
Mott	Hettinger	2,424	41	42.3	0.0	83	29	17	7	1.33	+0.11	0.47	10	3.5	7	11	7	12	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	40.5	−1.9	85	29	11	8	1.53	+0.33	0.64	4-5	7.8	9	7	14	9	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn	1,920	6	40.6	.....	81	28	11	15	1.91	.....	0.68	14	9.3	9	4	14	12	nw.	Peter F. Fick.
Parshall	Mountrail	1,929	33	40.7	+1.7	85	28	12	7	1.02	−0.05	0.40	4-5	5.0	6	2	24	4	nw.	C. E. Shubert.
Portal	Burke	1,954	34	39.2	−1.4	84	28	8	7	0.63	−0.31	0.25	2	3.0	4	7	18	5	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	43	38.8	−1.2	83	28	11	7	0.72	−0.42	0.36	2	3.5	3	5	16	9	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	32	40.8	−0.6	83	28	13	8	1.89	+0.67	0.70	14	16.4	7	10	10	10	nw.	Assumption Abbey.
Ryder	Ward	2,108	19	.....	.....	84	28	.....	.....	0.74	−0.37	0.46	3	2.5	8	7	3	20	se.	S. C. Schellebaum.
Sanish	Mountrail	1,835	22	39.5	−2.2	86	28	8	7	1.45	+0.33	0.58	3	7.0	8	8	7	15	e.	H. J. Bugge.
Stanley	Mountrail	2,258	10	36.4	.....	84	28	7	7	1.14	.....	0.47	3	5.0	3	13	10	7	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	19	.....	.....	84	28	.....	.....	1.29	+0.14	0.75	4-5	6.0	7	9	15	6	ne.	Geo. N. Pilgard.
Tioga	Williams	2,279	19	.....	.....	84	28	.....	.....	0.55	−0.43	0.45	4-5	4.0	2	9	9	12	sw.	L. A. Simon.
Trotters	Golden Valley	2,279	22	.....	.....	84	28	.....	.....	1.30	+0.25	0.56	14	10.0	5	2	21	7	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	41.4	.....	86	28	11	7	0.78	.....	0.36	4-5	5.0	5	7	13	10	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	35	41.8	+0.4	86	28	16	6	2.18	+1.01	0.84	4-5	11.0	9	3	21	6	nw.	J. C. Zeller.
Willrose	Williams	2,258	18	.....	.....	84	28	.....	.....	0.93	−0.03	0.56	4-5	6.7	3	12	10	8	n.	Jonathan Winkjer.
Williston	Williams	1,878	69	41.2	−0.8	83	28	8	7	1.59	+0.39	1.06	4-5	10.6	11	5	8	17	nw.	U. S. Weather Bureau.
Average for Western Division				40.5	−0.9	88	28	0	8	1.36	+0.14	1.33	3-4	8.8	7	9	11	10	nw.	
Average for the State				39.9	−1.7	90	28	0	8	1.48	+0.06	1.56	4-5	6.8	8	8	11	11	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for April 1947

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum	44	47	46	38	34	27	40	40	46	37	40	55	55	41	48	48	53	40	53	64	45	43	44	60	59	73	55	79	81	63	49.9	
	Minimum	25	29	30	32	32	13	11	23	21	25	30	31	30	25	26	24	30	32	20	28	32	29	28	24	22	31	28	40	39	50	28.0	
Bismarck Airport	Maximum	54	51	52	40	31	29	33	44	49	46	44	44	56	34	40	53	58	44	61	67	46	45	55	56	64	74	62	84	83	65	52.1	
	Minimum	28	32	40	31	23	19	26	15	25	34	35	33	30	26	28	30	31	29	27	36	32	29	30	26	22	36	31	42	42	52	30.7	
Bottineau	Maximum	40	50	51	43	33	30	35	39	51	50	45	40	48	50	48	52	50	50	55	60	55	47	47	61	65	58	87	85	81	64	51.8	
	Minimum	29	30	30	28	14	12	10	19	27	32	28	27	30	22	18	27	23	22	24	25	25	25	25	21	19	35	20	39	36	49	25.0	
Carson	Maximum	56	45	48	40	32	28	35	45	50	50	48	46	58	44	35	50	61	52	63	67	50	43	54	59	64	73	65	82	83	64	53.0	
	Minimum	28	30	33	31	21	20	20	13	26	32	33	32	31	30	21	24	28	31	25	35	32	27	27	27	21	33	31	48	41	48	29.3	
Crosby	Maximum	56	54	37	32	26	29	32	40	49	57	40	46	45	43	45	53	54	45	67	64	41	50	46	48	63	66	69	82	81	65	50.8	
	Minimum	26	30	33	27	18	10	10	11	18	28	30	29	29	30	22	28	29	25	26	29	25	23	24	29	26	35	24	32	41	49	26.8	
Devils Lake	Maximum	50	53	43	38	29	34	41	44	52	44	38	46	48	42	46	52	48	37	54	65	40	46	52	51	63	66	56	85	82	65	50.3	
	Minimum	25	29	38	29	23	16	23	24	27	35	31	26	31	26	23	31	23	24	22	36	30	27	30	24	27	31	28	40	44	47	29.0	
Dickinson Airport	Maximum	52	47	43	33	25	25	37	39	48	55	43	46	52	38	40	48	60	46	64	57	39	41	50	52	63	71	70	81	80	56	50.0	
	Minimum	27	30	33	24	18	11	9	27	29	34	31	37	27	11	26	30	30	30	36	30	28	25	28	25	35	34	44	44	41	38	28.2	
Dunn Center	Maximum	55	50	45	32	24	27	33	45	51	55	45	48	50	36	40	51	59	45	66	60	40	45	49	54	64	70	69	85	81	59	51.1	
	Minimum	25	25	32	31	19	19	20	8	9	28	31	32	32	31	14	15	30	31	29	34	31	27	27	26	32	32	30	44	42	40	27.3	
Fargo Airport	Maximum	47	53	41	43	37	31	31	34	40	37	39	44	50	41	40	52	42	39	49	55	46	42	52	51	59	62	53	82	77	61	47.7	
	Minimum	34	30	39	36	31	20	18	19	25	32	32	28	34	29	29	31	30	28	24	35	32	31	34	28	29	35	32	42	48	45	31.3	
Fessenden	Maximum	49	53	48	47	30	29	37	42	48	43	41	42	50	45	45	52	48	47	57	65	54	44	52	52	63	67	58	86	83	78	51.8	
	Minimum	26	28	26	28	23	12	14	17	26	33	31	29	31	27	26	32	30	28	23	36	29	27	29	25	23	36	29	40	52	40	28.5	
Fullerton	Maximum	41	45	47	43	35	32	34	40	47	46	38	46	55	43	41	51	49	45	52	60	50	40	53	57	59	72	56	79	79	61	49.8	
	Minimum	31	30	37	32	32	17	18	17	24	33	33	31	32	28	28	30	30	32	33	28	33	29	33	27	27	35	28	42	42	49	30.6	
Garrison	Maximum	54	51	47	36	26	33	33	44	47	50	45	41	49	36	49	52	56	44	64	62	41	42	51	54	64	70	63	86	84	67	51.4	
	Minimum	27	30	36	26	22	17	20	13	25	34	32	32	34	28	27	30	30	30	27	36	30	27	28	29	23	37	29	38	45	48	29.7	
Golva	Maximum	55	50	40	36	30	30	33	41	48	53	44	48	54	47	44	57	66	46	68	54	56	45	43	50	56	70	76	82	79	62	52.1	
	Minimum	29	28	35	28	19	15	6	0	25	28	34	30	39	32	19	30	24	31	32	30	31	29	27	24	23	34	41	49	44	41	28.6	
Grafton	Maximum	51	55	53	42	36	35	41	43	44	45	45	45	50	45	46	49	46	43	43	54	51	46	53	47	63	63	52	86	85	74	51.0	
	Minimum	27	28	36	32	31	22	22	25	28	33	32	25	34	30	22	30	25	27	18	35	36	28	32	24	22	32	32	35	45	46	29.5	
Grand Forks Airport	Maximum	48	53	41	41	41	33	37	39	40	42	44	50	40	44	53	42	36	46	53	46	44	53	50	61	61	51	84	77	58	47	48.2	
	Minimum	25	29	36	36	29	21	20	20	28	33	30	26	31	29	24	30	28	24	21	35	31	29	29	23	25	32	27	36	41	46	29.1	
Jamestown Airport	Maximum	48	50	44	40	34	30	36	39	46	39	40	45	53	39	45	53	47	41	54	62	43	39	53	47	62	70	52	83	81	65	49.4	
	Minimum	30	28	36	32	25	16	15	18	25	33	32	30	31	25	29	31	30	25	21	32	33	28	28	24	23	35	27	43	43	50	29.3	
Kenmare	Maximum	54	52	42	31	27	33	39	47	50	58	40	45	49	45	48	53	54	43	65	60	42	54	48	51	62	67	64	84	83	66	51.8	
	Minimum	27	32	33	30	19	9	12	19	24	31	30	30	32	28	22	30	32	25	27	28	28	25	30	29	27	41	26	38	40	54	28.6	
Langdon	Maximum	46	48	50	40	28	35	42	43	50	49	45	45	47	42	48	52	45	46	44	55	50	48	52	51	58	65	54	85	82	70	50.0	
	Minimum	25	30	35	28	22	12	16	24	23	33	28	20	33	25	17	27	24	21	19	32	30	24	26	20	23	31	18	35	40	47	26.3	
Marmarth	Maximum	57	52	43	37	30	30	33	41	53	53	57	53	61	57	45	55	70	62	68	68	55	39	53	58	66	70	78	84	83	69	56.0	
	Minimum	30	35	35	27	20	18	16	1	35	33	37	30	35	32	25	25	40	32	30	35	30	30	35	35	18	34	35	38	40	42	30.3	
Minot Airport	Maximum	54	53	45	36	25	27	38	43	47	46	41	41	47	41	45	52	51	40	65	62	40	46	48	49	64	69	63	86	82	64	50.3	
	Minimum	26	33	36	25	17	11	13	18	30	35	30	30	31	30	24	33	30	26	30	30	30	28	27	30	29	25	33	25	41	47	48	29.0
Mott	Maximum	54	52	48	44	33	27	30	44	53	57	45	73	67	53	39	51	64	61	65	60	55	43	53	55	64	72	69	82	83	73	55.6	
	Minimum	24	30	38	30	19	20	17	26	29	30	33	36	33	30	19	27	29	32	30	28	32	30	27	21	20	24	27	45	40	45	29.0	
Pembina Airport	Maximum	50	54	40	40	35	32	40	45	45	45	43	44	46	39	46	51	43	32	37	51	43	47	48	44	62	58	52	87	72	61	47.7	
	Minimum	23	26	35	30	20	21	24	28	33	29	23	30	26	21	27	24	21	17	30	28	28	28	22	21	30	22	35	39	46	46	27.2	
Sharon	Maximum	47	53	45	40	32	32	37	39	40	38	37	47	50	42	46	54	43	40	48	59	50	41	58	50	55	65	58	85	80	65	49.3	
	Minimum	28	30	36	32	28	17	18	22	27	33	31	24	35	26	22	29	22	28	20	34	33	26	31	23	28	34	27	40	45	51	29.3	
Steele	Maximum	48	50	50	49	32	26	39	39	49	40	39	43	54	44	49	52	54	43	58	59	50	44	55	56	62	79	78	88	88	70	52.9	
	Minimum	28	29	37	31	22	12	11	15	20	32	30	28	28	23	23	30	29	28	18	32	29	26	28	22	19	31	27	37	39	49	27.1	
Valley City	Maximum	47	52	50	43	36	34	35	39	44	43	37	45	53	53	44	53	46	44	52	61	59	40	54	52	58	68	60	83	78	75	51.3	
	Minimum	34	31	37	33	32	19	19	20	24	34	33	28	36	28	26	32	29	33	20	34	35	31	33	27	26	37	38	40	44	51	31.5	
Wahpeton	Maximum	42	53	47	41	38	32	35	35	44	43	40	45	52	51	41	51	51	45	49	55	55	40	55	52	68	70	62	80	80	77	51.0	
	Minimum	28	29	37	37	31	23	20	24	30	34	32	27	34	31	28	30	31	34	23	33	29	31	32	28								

Daily Precipitation for April 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington ²	James			.08	T	.28	.13				.05	T		T.			T.	.05	T.			.06				.03						.01		0.69	
Casselton	Red.	.04		.15	.63	.65	1.46				.60	.07	T.	.01			T.	.05	T.						.02	T.						.43		4.11	
Cooperstown	Sheyenne			.10		.28	.33				.18			.13			T.	.15									T.					.15		1.32	
Courtenay	James			.06	.05	.20	.05				.12	.06				T.	.10					.12				T.	T.	T.				.16		0.92	
Devils Lake ^{1 5}	Devils Lake			.11	.12	.02	.01				.04	T.		.14		.05	.02			T.	.01					T.	T.	T.	.02			.08		0.70	
Edgeley	James	.25		.08	.45	.41	.17				.21											T.			.04	T.	T.					.15		1.85	
Edmore	Devils Lake			.02		.03					T.		.20				T.	T.		T.		T.		.26		T.	T.					.23		0.74	
Ellendale	James	.38			.30	.81	.53				.27	.03			.27	T.									.08	T.	T.					.15		2.82	
Fargo ^{1 5}	Red.	T.		.18	.45	1.09	.20				.83	.07		.01			.01	.14	T.		T.			.02	T.	T.	T.		T		.69		3.69		
Forman	Sheyenne			.10	.28	.55	.20				.74	.12			.06							T.		T.		T.	T.					.20		2.29	
Fullerton	James	.43		.12	.42	.67	.56				.25	.06	T.	T.	.17										T.	T.	T.					.18		2.86	
Gackle	do	.01		.12	.22	.08					.10											.01	.04			T.	T.					.04		0.61	
Grafton	Red.			.07	.05	.27	.01				.07	.07		.13								.01	.06		.05	.06	T.	T.			.08	.17	1.06		
Grand Forks Airport ³	do			.30	.31	.33	.06				.28	.03		.24			.09	T.		T.		.05			.02	.02			T.		.29		2.02		
Hankinson ²	James	.65	.04	.05	.13	.45	.98				.14	.60	.03					.12				.01	.01	.09		T.	.07				.59		3.96		
Hannah	Pembina			.20							.32	.17		.22				T.													.05		0.47		
Hillsboro	Red.			.10	.07	1.56	.37				.19	T.		T.	T.	T.		.06				.01			T.	.05	T.	T.		T.	.02	T.	.61		3.32
Jamestown Airport ³	James	.03	T.	.15	.60	.54	.02			.06								.02				.05			T.	.05	T.	T.		T.		.20		1.88	
Langdon	Pembina			.04	T.	.12								.16			.05	.01				T.		.01								.09		0.48	
Larimore	Red.				.12	.40	.12				.16	.11						.21					.02					.04				.15		1.33	
Lisbon	Sheyenne	.16	.04	.10	.16	.50	.96				.11	.90	.03					.07									.02				T		3.05		
Mayville	Red.			.10	.04	.50	.41				.29	.17		.06			T.	.06				T.	.05			.06		.02			.25		2.01		
McHenry	James			.07	.03	.19	.08				.09	.02		.10			.06	.15				T.			.01	.02					.14		0.96		
McLeod	Sheyenne	.11		.27	.20	1.01					.81			T.			.02									.01	.02				.56		3.03		
Oakes ²	James	.30	T.	.09	.13	.49	.40				.23	.33	.05			.12		.03				.03	.05		.03		T.		.05		.02		2.25		
Park River	Red.				.05	.10					.04	T.		.21			.10				T.	.01	.05		.03	.14			T.		.14		0.83		
Pembina Airport ³	do			.08	.06	.04					.01	.03		.25			T.				T.	.01		.01		.02	T.	T.		T.	.27		0.78		
Petersburg	do			T.	.04	.17	.02				.12	.01		.22			.05	.14				T.		.01		.02	T.	T.		T.	.25		1.02		
Sharon	do			.05	.03	.70	.45				.23	.15		.06			.04	.21				.02			.03	.03		T.			.20		2.21		
Valley City	Sheyenne	T.		.06	.40	.60	.50				.30	.12					T.	.06				.02	.02		.08	.03		T.			.12		2.18		
Wahpeton	Red.	.31		.22	.27	1.26	.36				.53	.12		.02			.10	.05				.01	.02	.02	T.	.05	.01		.07	.08	.61		4.01		
Middle Division																																			
Ashley ³	Missouri	.06	.02	.27	.06	.22	.18				.15	.08				.26		.14				.09				T.							1.55		
Bisbee	Devils Lake			.38	T.	.17					T.			.17			T.	.02			.05				.02	.04					T.		0.83		
Bismarck Airport ^{1 5}	Missouri		.03	.02	.30	.27	.02			T.	.02	T.		T.		.21	T.	T.			.01										.04		0.90		
Bottineau ²	Mouse			.35	.05			.03			.02	.02	T.	.16			.03	.18			.22	.02					T.				.05		1.16		
Butte	do			.49	T.	1.08	T.			T.				T.		.55		.10													.03		1.70		
Carson	Heart	T.		.04	.65	.28				.10			.08			.33		.03													.08		1.76		
Center	Missouri			.28	.24	.68				T.				.04		.33		.03												.01		1.57			
Drake ²	Mouse			.54	.07		.15						T.	.04				.11													.10		1.01		
Dunseith	do			.38		.03				.01			.15			.03		.10			.22										.02		0.94		
Eckman	do			.55	.05	.20	.20			T.			.02	.02				.14				.25						.08					1.51		
Fessenden	James			.17	.20	.65										.09					.02			.04							.06		1.23		
Fort Yates	Missouri	.05			.40	.15	.10				.15		.08		.50	.10															T		1.53		
Foxholm	Mouse			.47	T.	.51				T.			.02		.03			.09		.01	T.										.02		1.12		
Garrison ³	Missouri	.24	.47	.60	.42								.03		.03			.02		.01					T.						.07		1.89		
Granville	Mouse			.59	T.	.21	T.			T.								.13		.06		T.									.02		1.01		
Hansboro	Devils Lake			.27	T.	.03				T.			.03				T.				.04					T.	T.						0.37		
Linton	Missouri			.02	.49	.59	.15			.02	.15			.09	.42	.03	.05	.28				.02	.05								.06		1.98		
Maddock	Sheyenne			.36	.29	.59	.06				T.						.05					.02			T.				T.		.10		1.25		
Mandan ²	Missouri	T.	T.	.21	.09	.65	.42	T.			T.		.02	T.	.01	.44						.04							T.	T.	.02		1.90		
Max ²	do			.61	.13	.12						T.									.12				.02						.06		1.19		
McClusky	do			.36	.34	.16										.08															.06		1.02		
Minot Airport ³	Mouse		T.	.65	.30	.59				T.	T.	T.	.01	T.			.07	T			.01	T.		T.		.10					.06		1.69		
Mohall	do			.27	.01	.83							.05				.11			.10											T		1.41		
Napoleon	Missouri	.03		.09	.13	.16	.02				.20		T		.15	T.					.04		.06		.04	.03					.05		0.96		
New Salem	Heart		.06	.12	.20	.61	T.			T.			.02		.28						.06										.01		1.36		
Petibone	James			.32	.12	.51	.24				.05				T.			.05			.12					.02					.21		1.65		
Rolla	Devils Lake			.30	.02	.26				.01				.16	T.		.01	.04			.19	.02											1.02		
Rugby	Mouse			.12	.20	.20								.05																T.		T		0.42	
Selfridge	Missouri			.42	.45	.20							.07	T	.68																		1.82		
Steele	do			.20	.14	.66				.07	.01				.10																.11		1.34		
Towner	Mouse			.45	T.	.35	.05											.11															0.96		
Turtle Lake	Missouri			.32	T.	.32							.01		.05											T.	T.			T		.08		0.86	
Tuttle	do		T.	.31	.05	.48	.06				.01				.02			T								.05				T	.05		1.04		
Underwood	do			.32	T.	.68							T.		.15											T.	T.						1.15		
Velva	Mouse			.71	.02	.77	T.			T			.01				T									.02					T		1.63		
Washburn	Missouri			.10	.12	.75							T		.19																				

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

^b Recording gage

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 8-11-47-1200]

51.05
VNT
565

Nat. Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

AUG 25 1947

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LVI BISMARCK, N. D., MAY 1947 No. 5

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

Both temperature and precipitation averaged below normal, temperature by 3.5°, and precipitation by 1.17 inches. The outstanding feature was the cold during the last week, especially from the 27th through the 29th, when all stations recorded record breaking low temperatures for this late in the season. Many stations had temperatures of 20° or lower. Damage to vegetation, while considerable, was lessened due to retarded growth caused by a cool spring. Pastures and ranges were backward, affording little feed. Spring wheat and other small grain planting was completed, with corn, flax and potato planting well underway at the close of the month. Sunshine for the month was near the normal. Many persons in Bismarck and surrounding territory from Mercer to Sioux Counties reported a feeble earthquake shock on the 13th. No damage was reported.—M.S.C.

TEMPERATURE

The mean temperature for the state was 49.9°, or 3.5° below the 1892-1947 average for May. The mean temperature for the eastern division was 49.7°; for the middle division, 49.7°; and for the western division, 50.2°. The highest mean temperature was 52.6° at Marmarth, and the lowest, 45.7° at Hannah, making a range in mean temperature of 6.9°. The absolute range was 74°, from 87° at Granville on the 30th, to 13° at Towner on the 28th. The average daily excess in temperature for the state since January 1, 1947, is 0.2°.

PRECIPITATION

The average precipitation for the state was 1.11 inches, or 1.17 inches less than the 1892-1947 average for May. In the eastern division the average amount was 1.23 inches; in the middle division, 1.04 inches; and in the western division, 1.05 inches. The greatest monthly amount reported was 2.27 inches at Carrington; the least was 0.21 inch at Gackle. The greatest amount recorded in any 24 consecutive hours was 0.95 inch at Minot Airport on the 5-6th. The accumulated deficiency in precipitation for the state since January 1, 1947, is 1.74 inches. The average snowfall was a Trace.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.45	8	29.51	30	12.4	43	nw.	1	68	76	42	41	60	423
Devils Lake....	30.54	8	29.45	30	9.7	31	nw.	3	79	44	38	58	508	
Fargo.....	30.49	8	29.53	31	13.9	42	nw.	3	76	82	51	49	465	
Williston.....	30.40	6	29.36	30	8.7	28	nw.	3	64	73	45	40	65	440

† And other dates.

AUG 23 1947

UNIVERSITY OF ILLINOIS

COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	46.6	96	13	3.43	1.84	1.33	2.20	3.9	12	6	8	17	
1893...	52.2	97	19	1.29	1.14	2.40	1.61	0.2	6	11	8	12	
1894...	54.6	98	23	1.40	1.24	1.88	1.51	0.0	5	16	9	6	
1895...	54.4	101	15	2.60	2.88	2.57	2.48	0.0	8	10	11	10	
1896...	56.9	103	22	5.44	3.70	5.81	4.95	0.0	13	6	14	11	
1897...	55.4	97	16	0.85	0.61	0.60	0.67	T.	4	16	10	5	
1898...	52.7	92	14	1.95	1.84	2.15	1.98	0.0	5	15	9	7	
1899...	50.6	91	16	3.40	4.80	2.27	3.49	0.4	8	9	9	13	
1900...	59.2	106	15	0.78	0.70	0.59	0.69	0.0	3	18	8	5	
1901...	60.0	99	19	0.35	0.24	0.33	0.31	T.	2	21	6	6	
1902...	55.9	94	24	4.31	3.33	3.06	3.57	0.4	10	13	4	12	
1903...	54.3	96	11	2.52	3.35	3.50	3.12	T.	4	14	8	9	
1904...	54.2	93	20	2.05	1.64	1.10	1.60	T.	6	14	9	8	
1905...	50.1	88	10	4.24	2.78	1.72	2.91	4.0	8	12	8	11	
1906...	50.8	99	11	4.41	4.74	5.59	4.91	0.4	12	9	8	14	
1907...	44.0	84	6	1.52	1.02	1.39	1.31	3.1	6	12	10	9	
1908...	50.8	88	9	3.54	2.58	2.57	2.90	0.9	8	13	7	11	
1909...	51.0	98	5	4.78	3.92	4.68	4.46	0.1	10	12	9	10	
1910...	50.7	94	10	0.86	0.95	1.28	1.03	0.1	6	12	11	8	
1911...	55.0	99	6	4.06	2.25	2.39	2.90	T.	8	14	9	8	
1912...	54.2	90	16	4.17	4.59	4.42	4.39	0.7	11	10	10	11	
1913...	51.2	100	11	1.75	1.63	1.74	1.71	0.2	9	10	10	11	
1914...	55.2	95	16	1.83	2.56	1.98	2.12	1.0	8	16	8	7	
1915...	51.1	98	15	3.37	3.21	2.81	3.13	0.4	9	10	10	11	
1916...	51.0	95	7	2.95	1.70	1.64	2.10	0.3	8	11	11	9	
1917...	51.2	98	15	0.21	0.29	0.53	0.34	0.1	2	20	7	4	
1918...	51.7	99	6	2.58	2.40	1.83	2.27	0.5	9	10	11	10	
1919...	55.5	101	16	4.29	3.14	1.91	3.11	0.4	9	16	8	7	
1920...	53.9	89	20	2.40	1.34	1.54	1.76	0.1	7	13	10	8	
1921...	53.8	90	21	2.75	2.22	2.36	2.44	T.	9	13	10	8	
1922...	56.3	93	24	4.29	2.81	3.08	3.39	0.1	12	10	11	10	
1923...	54.1	100	13	2.56	1.57	1.17	1.77	0.2	6	15	10	6	
1924...	46.9	84	15	1.05	0.57	0.81	0.81	0.0	5	12	10	9	
1925...	53.6	111	10	1.94	1.17	1.22	1.44	T.	4	17	9	5	
1926...	58.5	105	10	2.07	2.09	2.45	2.20	0.0	7	13	11	7	
1927...	48.0	87	13	5.21	6.06	5.77	5.68	3.2	14	6	8	17	
1928...	58.2	107	16	1.02	1.23	1.00	1.08	0.0	5	18	7	6	
1929...	49.1	92	8	2.00	2.69	4.28	2.99	0.4	7	16	9	6	
1930...	50.8	98	18	3.76	2.40	1.69	2.62	0.7	9	12	8	11	
1931...	53.1	100	10	2.17	1.09	0.98	1.41	0.3	6	16	7	8	
1932...	55.9	98	25	2.66	2.02	1.76	2.15	2.2	6	13	9	9	
1933...	54.8	98	19	2.78	3.18	3.50	3.15	T.	9	9	10	12	
1934...	63.6	111	18	0.46	0.32	0.29	0.36	0.0	3	17	10	4	
1935...	49.5	89	20	2.11	2.93	2.79	2.61	1.5	12	6	11	14	
1936...	61.0	100	20	1.05	0.66	0.70	0.80	T.	4	19	9	3	
1937...	56.9	99	19	2.35	1.67	1.27	1.76	T.	7	12	11	8	
1938...	52.0	88	18	2.93	2.07	2.66	2.55	0.2	11	8	12	11	
1939...	60.1	104	18	1.33	1.60	1.71	1.55	0	8	13	11	7	
1940...	54.9	96	17	1.60	2.26	2.06	1.97	0.1	8	14	11	6	
1941...	58.3	98	21	2.23	3.12	3.48	2.94	T.	12	10	10	11	
1942...	50.0	87	19	3.87	2.94	2.27	3.03	0.5	11	9	9	13	
1943...	49.9	96	15	2.72	2.25	1.66	2.21	1.0	9	8	10	13	
1944...	58.2	95	11	3.33	2.64	2.22	2.73	0.1	11	11	12	8	
1945...	47.7	84	10	1.60	1.42	1.61	1.54	0.5	8	10	11	10	
1946...	50.6	88	10	1.61	1.38	1.82	1.60	0.6	9	9	11	11	
1947...	49.9	87	13	1.23	1.04	1.05	1.11	T.	7	10	14	7	
Period	53.4	111	5	2.49	2.18	2.16	2.28	0.5	8	13	9	9	

NAT.
HIST.

Climatological Data for May 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	50.4	.....	82	17	17	7	1.60	.....	0.82	22	0.4	13	20	9	2	nw.	Albert Thoren.
Carrington	Foster	1,579	50	48.8	-4.3	80	30	21	28	2.27	-0.22	0.85	6	0	9	16	4	11	.....	Soo Line Agent.
Casselton	Cass	934	52	51.6	-3.1	82	17	25	7	1.78	-1.02	0.47	25-26	0	11	9	12	10	n.	Ashton Lockhart	
Cavalier	Pembina	894	40	48.8	-4.8	83	17	22	27	0.47	-1.79	0.25	20	T.	5	12	1	18	nw.	City Light & Power Co.	
Colgate	Steele	1,180	14	.....	.....	.....	.....	.....	.....	1.71	-0.99	0.75	5	0	5	10	12	9	nw.	O. M. Jensen.
Cooperstown	Griggs	1,423	51	49.1	-4.7	76	16	22	8	0.87	-1.66	0.40	25	0	4	6	20	5	nw.	R. J. Lockner	
Courtenay	Stutsman	1,523	17	.....	.....	.....	.....	.....	.....	1.50	-0.93	0.67	5-6	0	5	10	15	6	nw.	G. H. Hanawalt.
Devils Lake	Rainey	1,471	72	48.6	-4.0	78	16	21	8	1.23	-0.80	0.39	21-22	T.	9	6	13	12	nw.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	47	50.3	-4.1	81	10	21	8	1.30	-1.26	0.40	5-6	0	11	11	17	3	nw.	N. Dak. Agri. Exp. Sta.	
Edmore, 1 1/2 miles W.	Rainey	1,524	24	46.2	-7.0	77	17	16	8	1.19	-0.67	0.33	20	T.	9	19	9	3	nw.	Mike Davis.	
Ellendale	Dickey	1,457	49	50.8	-4.5	79	14	24	8	1.00	-1.61	0.26	12-13	0	10	10	11	11	nw.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	50.0	-5.1	81	17	26	28	1.33	-1.56	0.40	21-22	0	11	6	12	13	n.	U. S. Weather Bureau.	
Forman	Sargent	1,249	56	51.4	-4.3	81	17	27	8	1.50	-1.45	0.58	6	0	8	15	10	6	ne.	Art Waterman.	
Fullerton	Dickey	1,439	50	50.8	-4.0	79	17	25	8	1.06	-1.93	0.36	6	0	9	10	14	7	nw.	F. O. Alin.	
Gackle	Logan	1,951	17	50.4	-3.9	78	17	25	29	0.21	-2.37	0.09	21	T.	4	4	23	4	nw.	Tony Martin.	
Grafton	Walsh	827	56	49.8	-4.3	80	17	22	8	0.72	-1.30	0.33	25	0	8	11	15	5	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	57	49.8	-4.4	81	17	24	8	1.45	-1.05	0.41	20	0.3	11	8	13	10	nw.	University of N. Dak.	
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	7	48.6	.....	80	17	22	8	1.33	.....	0.37	20	0.4	10	7	8	16	n.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	50.8	-7.2	83	17	27	8	1.86	-1.00	0.59	1	0	10	14	5	12	nw.	Soo Line Agent.	
Hannah	Cavalier	1,568	54	45.7	-5.9	75	16	18	28	0.24	-1.87	0.11	25	0	3	3	25	3	nw.	A. E. Prior.	
Hillsboro	Trail	901	42	51.0	-3.8	82	17	26	8	1.90	-1.05	0.73	22	0	9	7	16	8	n.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	56	51.1	-3.0	80	17	23	28	1.30	-1.47	0.58	6	0	6	5	19	7	nw.	N. Dak. State Hospital.	
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	7	49.5	.....	79	14	21	28	1.27	.....	0.62	5-6	T.	11	8	13	10	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	49.2	.....	79	17	20	28	1.58	.....	0.82	5-6	0	5	7	15	9	nw.	U. S. Wildlife Refuge.
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	47.2	-4.6	79	17	14	8	0.54	-1.45	0.17	20	T.	7	8	19	4	nw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	55	50.2	-3.2	80	17	20	8	1.25	-1.48	0.60	22	0	9	9	10	12	n.	Jesse P. Phillips.	
Lisbon	Ransom	1,091	44	49.4	-5.4	81	17	25	7	1.63	-1.14	0.44	6	0	10	15	6	10	nw.	J. O. Halverson.	
Mayville	Trail	975	52	49.7	-5.7	82	17	24	8	1.09	-1.63	0.37	25	T.	8	9	10	12	n.	H. A. Ragatz.	
McHenry, 6 miles NNE	Eddy	1,509	25	48.4	-4.3	79	17	17	8	1.19	-1.12	0.31	21-22	0	8	9	13	9	nw.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	36	51.0	-4.8	83	17	25	7	1.43	-1.58	0.45	19	0	6	22	5	4	sw.	J. G. Carlson.	
Munich, 3 1/2 miles SW	Cavalier	1,594	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.25	20	0.1	7	7	15	9	nw.	Harold Feldner
Oakes	Dickey	1,318	19	51.1	-4.5	77	10	24	30	1.43	-1.28	0.88	6	0	10	18	5	8	nw.	C. M. Hagen.	
Park River	Walsh	996	44	49.3	-4.3	80	17	20	8	0.35	-1.59	0.22	25	T.	4	13	14	4	nw.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	795	74	47.0	-6.2	78	17	20	8	0.63	-1.56	0.18	20	T.	9	2	13	16	n.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	17	48.2	.....	75	17	21	28	1.28	-1.16	0.55	22	0	9	9	18	4	n.	T. C. Overland.
Sharon	Steele	1,516	24	49.2	-4.9	78	17	21	28	1.23	-1.61	0.30	22	T.	8	9	9	13	ne.	Hugh Lyon.	
Valley City	Barnes	1,229	43	51.6	-3.0	80	17	25	30	1.57	-1.21	0.63	14	0	7	13	9	9	nw.	Miss I. C. Robertson.	
Wahpeton	Richland	962	56	51.9	-4.4	82	17	24	8	1.76	-0.94	0.45	21-22	0	12	12	14	5	nw.	State School of Science.	
Average for Eastern Division				49.7	-4.6	83	17	14	8	1.23	-1.26	0.55	6	T.	8	10	12	9	nw.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,025	52	51.0	-3.2	80	14	25	29	0.96	-1.44	0.20	19	0	9	21	5	5	nw.	Eddie H. Glur.	
Belcourt	Rolette	1,960	3	46.2	.....	76	30	16	28	0.75	.....	0.26	20	T.	10	5	22	4	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	.....	.....	.....	.....	.....	.....	1.79	-0.36	.....	.....	.....	.....	.....	.....	.....	.....	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	51.8	-3.0	82	30	25	28	0.72	-1.51	0.26	21-22	0	7	7	16	8	nw.	U. S. Weather Bureau.	
Bismarck Airport, 2 1/2 mi. SE.	Burleigh	1,650	8	51.3	-1.7	84	30	23	28	0.79	-1.53	0.29	19-20	0	10	7	16	8	nw.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	56	48.5	-3.8	78	30	15	28	1.06	-0.99	0.33	11	0	7	7	19	5	nw.	N. D. School of Forestry.	
Butte, 3 miles WSW	McLean	1,880	23	49.8	-5.0	80	30	18	28	1.15	-1.33	0.49	5-6	0	6	15	7	9	nw.	R. L. Williams.	
Carson, 2 miles SW	Grant	2,500	36	51.2	-3.3	80	16	21	28	1.10	-1.30	0.41	18	0	6	7	21	3	nw.	J. W. Everts.	
Center	Oliver	2,100	10	48.2	.....	81	30	18	28	1.12	.....	0.53	21	0	8	5	22	4	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	50.2	-4.5	82	30	16	28	1.20	-0.88	0.63	5-6	0	8	19	10	2	nw.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	52	48.6	-4.2	77	30	18	28	0.66	-1.21	0.33	20	0	3	2	20	9	nw.	State Tuberculosis San.	
Eckman	Bottineau	1,500	42	47.7	-4.9	81	30	15	28	1.21	-0.77	0.47	5	0	6	7	19	5	nw.	E. K. Sherman.	
Fessenden	Wells	1,610	36	50.6	-2.7	81	30	19	28	0.94	-1.34	0.39	19-20	0	5	12	18	1	w.	John V. Zuber.	
Fort Yates	Sioux	1,670	48	52.5	-4.2	82	30	22	29	0.83	-1.33	0.35	12	0	6	17	8	6	nw.	P. J. Jacobson.	
Foxholm, 6 1/2 miles NE.	Ward	1,609	27	50.6	-3.6	79	2	21	8	1.19	-0.84	0.58	5-6	0	8	2	12	17	nw.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	71	50.2	-3.4	81	30	20	28	1.29	-1.04	0.58	21-22	0	10	11	11	9	nw.	Mae H. Vorachek.	
Granville	McHenry	1,504	41	50.2	-2.7	87	30	17	28	1.06	-0.97	0.56	6	0	7	24	7	0	nw.	Fred Roble.	
Hansboro	Towner	1,597	40	48.3	-3.2	78	30	15	8	0.54	-1.56	0.24	24-25	T.	6	5	16	10	nw.	W. E. Disher.	
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	.....	.....	.....	.....	1.18	-1.00	0.42	5-6	0	7	6	16	9	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	49.4	.....	80	30	18	8	1.11	.....	0.44	25	0	7	3	25	3	w.	John Dulmage.
Linton	Emmons	1,711	31	52.0	-3.7	83	30	21	29	0.45	-1.84	0.15	21	0	7	6	12	13	nw.	Wm. Heyerman.	
Maddock, 1 mile E	Benson	1,604	33	49.9	-3.9	80	30	18	28	1.33	-0.72	0.37	5-6	0	7	5	22	4	nw.	Benson Cy. A. & T. Sch.	
Mandan, 1 1/2 miles SW	Morton	1,750	34	50																	

Climatological Data for May 1947—Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmeasured	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Elbowoods	McLean	2,082	55	50.4	-4.2	82	30	18	28	1.14	-1.05	0.35	10-11†	0	8	17	6	8	nw.	H. W. Case.
Epping	Williams	2,224	39	50.2	-4.8	82	2	20	28	1.69	-0.45	0.67	21	0	9	15	14	2	nw.	T. Beachler.
Fairfield, 9+ miles N.	Billings	2,650	19							1.10	-1.26	0.70	21-22	0	6	12	12	7	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	30	51.3		81	10	24	28	0.82	-1.53	0.35	21	0	6	15	12	4	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	7	50.6	-2.4	82	2	19	28	0.77	-1.49	0.54	20	0	5	7	18	6	nw.	Chester K. Puda.
Grenora	Williams	2,114	39	51.8	-0.4	79	2	21	28	1.59	-0.63	0.66	21	0	6	15	15	1	nw.	L. D. Nielson.
Halliday	Dunn	2,073	6							1.07		0.38	21	0	6	6	19	6	nw.	John Kisse.
Hettinger	Adams	2,675	41	51.2	-3.3	80	2†	17	29	0.88	-1.40	0.24	11†	0	5	17	12	2	nw.	Edgar Martin.
Kenmare	Ward	1,799	16	50.4	-3.5	79	2†	21	28	1.23	-0.75	0.55	5	0	9	9	15	7	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	52.6	-1.0	83	2†	23	29	0.98	-1.31	0.48	11	0	6	13	11	7	nw.	S. P. Grane.
Medora, 1+ mi. W.	Billings	2,271	33	51.3		83	10	19	28	0.58	-1.60	0.33	10-11	0	3	21	4	6	w.	Harry Roberts.
Mott	Hettinger	2,424	41	51.8	-2.8	81	30	22	28†	0.85	-1.41	0.24	18	0	6	11	11	9	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	50.4	-2.8	82	2	18	28	0.93	-1.24	0.28	18	T.	9	11	15	5	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn		6	50.2		81	10	20	29	0.72		0.38	21	0	5	12	10	9	nw.	Peter F. Fick.
Parshall	Mountrail	1,929	33	49.4	-4.6	80	2†	17	28	0.98	-1.19	0.33	21-22	0	9	7	23	1	nw.	C. E. Shubert.
Portal	Burke	1,954	34	48.4	-3.7	80	30	16	28	1.22	-0.85	0.31	5-6	0	6	7	21	3	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	43	49.0	-4.5	80	30	17	28	1.13	-1.02	0.28	18	0	7	7	20	4	nw.	E. J. Lewis.
Richardton, 1+ miles N.	Stark	2,467	32	50.6	-3.3	81	2	20	28	0.80	-1.66	0.27	21	0	6	11	14	6	nw.	Assumption Abbey.
Ryder	Ward	2,108	19							1.01	-1.08	0.28	21	0	7	5	10	16	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	48.0	-7.2	82	30	13	28	1.34	-0.61	0.63	21	0	9	18	12	1	w.	H. J. Bugge.
Stanley	Mountrail	2,253	10	47.6		80	30	19	28	1.10		0.27	5	0	8	11	12	8	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	19							1.40	-0.59	0.58	5-6	0	10	14	13	4	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	19							1.43	-0.63	0.43	21-22	T.	6	13	15	3	nw.	L. A. Simon.
Trotters	Golden Valley		22							0.58	-1.65	0.28	19	0	5	3	27	1	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	49.6		82	30	13	28	0.91		0.49	21-22	0	7	13	14	4	nw.	H. Glenn Sims.
Watford City	McKenzie	2,064	35	50.8	-3.7	83	2	19	28	1.03	-0.96	0.46	21	0	8	4	24	3	nw.	J. C. Zeller.
Wildrose	Williams	2,258	18							1.47	-0.43	0.28	19	0	13	9	18	4	nw.	Jonathan Winkler.
Williston	Williams	1,878	69	50.8	-3.2	82	2	21	28	1.41	-0.65	0.53	21	0	9	7	13	11	nw.	U. S. Weather Bureau.
Average for Western Division				50.2	-3.5	83	2†	16	28	1.05	-1.11	0.70	21-22	T.	7	11	14	6	nw.	
Average for the State				49.9	-3.5	87	30	13	28	1.11	-1.17	0.95	5-6	T.	7	10	14	7	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for May 1947

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	62	75	70	58	62	60	62	59	66	78	74	53	65	80	66	75	78	64	68	55	56	55	69	70	68	68	56	50	65	80	72	65.8	
	Minimum	38	39	39	36	33	32	26	26	27	38	50	42	40	41	42	34	47	37	36	43	30	32	30	39	46	32	30	25	32	45	36.1		
Bismarck Airport	Maximum	66	75	71	61	54	56	60	58	71	78	66	52	66	74	67	80	79	61	67	56	50	60	71	70	62	65	56	48	59	84	75	65.1	
	Minimum	43	33	50	35	35	34	28	25	36	52	52	43	37	47	42	34	46	39	36	38	33	40	32	49	36	34	32	23	25	27	46	37.5	
Bottineau	Maximum	66	71	71	62	58	56	54	52	68	67	69	63	70	70	70	76	73	69	65	63	61	64	68	67	63	57	57	48	56	78	67	64.5	
	Minimum	24	30	39	27	35	32	28	23	31	42	51	32	31	41	36	38	32	40	28	36	25	38	32	39	35	28	26	15	24	31	40	32.5	
Carson	Maximum	66	77	71	65	60	55	64	60	68	79	68	50	69	73	68	80	76	60	64	60	50	60	68	70	63	66	60	60	80	74	65.6		
	Minimum	40	30	51	29	38	34	31	25	41	49	45	38	41	45	42	37	42	43	34	33	35	37	38	45	43	34	25	21	23	30	34	36.9	
Crosby	Maximum	63	79	62	58	65	57	60	60	73	75	61	56	72	66	62	77	73	62	70	59	52	60	68	67	55	49	46	49	60	80	62	63.5	
	Minimum	40	35	44	30	32	33	28	25	32	41	48	38	27	40	36	35	40	41	29	35	34	37	31	38	41	32	25	19	20	29	38	34.0	
Devils Lake	Maximum	58	70	64	53	58	52	47	52	67	70	68	54	62	69	62	78	76	61	65	51	61	62	67	60	52	56	47	46	54	76	68	60.8	
	Minimum	39	32	43	38	31	33	29	21	30	43	51	39	30	45	42	41	50	41	35	41	33	42	40	46	34	30	28	23	33	32	41	36.5	
Dickinson Airport	Maximum	63	80	68	63	60	53	62	60	68	80	60	49	70	64	62	78	72	61	61	57	52	54	65	67	58	60	56	46	57	79	72	63.1	
	Minimum	38	35	39	32	36	34	28	27	36	49	48	39	41	44	38	37	43	38	33	36	36	36	36	45	47	37	35	27	19	26	33	45	36.3
Dunn Center	Maximum	63	81	66	61	58	54	62	61	72	79	59	45	70	68	62	79	73	61	65	59	46	57	69	78	56	57	56	47	60	80	70	63.7	
	Minimum	40	31	38	34	35	35	26	25	31	40	49	40	49	40	39	34	44	38	32	38	33	37	38	45	44	35	24	19	22	26	40	35.2	
Fargo Airport	Maximum	58	64	69	48	52	51	50	50	64	66	76	64	65	76	64	51	69	68	72	81	74	64	56	61	57	65	57	51	47	55	74	72	61.5
	Minimum	42	36	46	38	38	23	27	26	28	44	54	42	43	44	45	36	51	43	37	43	42	42	42	34	35	31	33	26	36	29	50	38.6	
Fessenden	Maximum	62	72	69	61	58	54	54	52	68	77	76	55	63	70	63	78	76	72	66	64	58	61	67	67	65	58	55	47	56	81	77	64.6	
	Minimum	38	29	54	35	38	32	29	21	28	42	54	38	38	43	42	38	48	40	32	40	30	41	35	45	45	33	28	19	27	31	42	36.6	
Fullerton	Maximum	61	67	70	60	58	53	55	52	67	77	75	69	58	74	66	75	79	66	67	53	58	57	68	68	66	64	54	48	46	75	75	63.6	
	Minimum	43	35	46	38	33	33	28	25	28	47	58	43	39	45	46	38	45	41	38	43	31	41	35	42	43	31	35	31	26	27	48	38.1	
Garrison	Maximum	64	78	66	61	54	58	61	58	70	77	67	63	65	71	61	79	75	66	69	54	56	62	67	68	65	58	52	52	58	81	71	64.1	
	Minimum	42	31	45	33	34	36	30	24	34	49	53	38	70	43	41	33	45	41	32	36	32	40	37	44	39	33	28	20	27	31	43	36.3	
Golva	Maximum	54	82	68	69	66	57	68	54	72	78	63	58	71	72	63	76	72	62	64	67	54	58	65	66	64	65	58	46	52	68	74	64.4	
	Minimum	41	35	38	31	37	31	28	30	37	43	41	31	36	48	35	39	41	40	44	42	46	33	35	32	43	41	40	32	19	26	42	37	36.9
Grafton	Maximum	60	65	68	63	59	58	51	53	64	63	72	54	66	72	67	76	80	77	65	64	63	63	69	69	61	53	53	48	54	71	72	63.6	
	Minimum	43	34	34	27	37	35	25	22	37	52	41	36	72	41	35	52	39	55	43	39	48	37	44	48	31	34	25	26	27	48	36.1		
Grand Forks Airport	Maximum	57	64	66	51	59	52	48	52	64	62	73	54	63	71	67	74	80	68	64	57	61	59	67	62	59	54	48	48	53	74	67	61.2	
	Minimum	37	31	42	36	38	27	24	22	29	38	53	40	37	44	37	46	39	35	42	39	41	36	44	32	31	27	23	80	29	42	36.0		
Jamestown Airport	Maximum	62	70	68	57	58	52	54	52	68	74	52	55	79	66	78	78	65	67	52	60	58	68	67	65	60	53	49	56	77	74	63.6		
	Minimum	40	31	44	34	31	31	28	25	30	45	50	42	41	42	43	33	46	37	34	39	31	40	32	42	30	30	30	21	28	25	48	34.5	
Kenmare	Maximum	65	79	64	57	61	57	58	56	70	70	61	54	65	71	64	76	73	62	70	57	55	63	68	65	65	60	49	51	69	79	65	63.2	
	Minimum	43	36	49	35	36	33	37	25	31	45	50	39	31	43	42	40	45	45	34	38	37	40	38	48	45	42	28	28	36	40	37.6		
Langdon	Maximum	64	66	67	58	60	58	45	63	64	63	64	58	63	70	67	75	79	69	66	62	65	68	68	65	69	57	49	48	55	71	67	62.7	
	Minimum	32	24	42	38	25	27	22	14	21	38	50	35	23	42	35	36	49	33	28	40	33	35	33	38	40	25	27	16	24	26	35	31.6	
Marmarth	Maximum	65	83	70	68	70	64	64	65	68	77	76	52	70	70	67	77	75	68	65	61	58	62	68	71	68	68	60	51	57	83	77	67.5	
	Minimum	36	33	50	30	41	34	32	33	38	45	50	39	40	47	40	87	42	48	35	36	40	35	31	45	42	38	32	25	23	28	40	37.6	
Minot Airport	Maximum	64	76	70	56	58	52	55	54	69	72	64	54	64	68	61	79	72	66	79	66	65	51	57	61	67	67	52	49	47	56	82	65.5	
	Minimum	43	36	44	36	34	37	30	24	30	47	48	40	32	46	42	40	48	44	34	38	34	40	40	44	41	39	27	20	28	37	45	37.5	
Mott	Maximum	64	80	69	67	60	55	64	60	66	79	70	53	71	72	66	79	78	74	62	57	58	56	68	68	65	65	58	52	58	81	75	66.1	
	Minimum	42	39	50	46	40	35	26	24	36	55	50	39	41	48	40	37	40	36	33	37	38	36	35	46	40	32	28	22	22	30	36	37.4	
Pembina Airport	Maximum	54	65	66	48	56	51	46	52	63	63	70	51	67	69	63	75	78	64	62	54	62	63	69	61	54	50	45	46	51	71	62	59.7	
	Minimum	37	31	43	35	36	30	23	20	24	39	48	38	30	45	39	33	44	35	35	41	39	39	30	42	33	31	28	22	25	25	42	34.2	
Sharon	Maximum	58	67	65	57	60	53	47	51	64	66	74	56	61	73	67	74	78	65	61	55	57	58	68	66	57	58	50	49	55	74	72	61.8	
	Minimum	40	30	46	33	32	34	24	22	30	37	55	39	37	45	43	38	50	32	34	41	34	30	36	44	38	30	30	21	21	31	28	46	36.5
Steele	Maximum	63	72	62	58	57	59	60	53	68	80	74	53	63	76	65	78	76	68	62	62	55	60	69	62	61	52	47	57	80	77	64.6		
	Minimum	39	28	47	34	31	31	25	20	31	52	52	39	38	42	38	33	42	37	31	38	25	39	28	44	43	28	28	20	21	25	44	34.6	
Valley City	Maximum	61	68	70	64	57	55	53	51	65	76	76	70	52	74	66	74	80	77	65	63	60	57	66	66	65	58	54	51	55	75	75	64.5	
	Minimum	43	36	51	38	33	29	28	27	29	44	45	44	49	43	45	38	52	41	45	43	36	44	43	46	45	33	34	26	33	25	46	38.8	
Wahpeton	Maximum	62	64	72	64	54	55	57	53	63	66	7																						

Daily Precipitation for May 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James	.30					.85	T.					.02		T.	.04					.21	.05	.59		T.	.17	.04						2.27
Casselton	Red.	.01	.02				.23	T.						.12	.36		.01		.06		.13	T.	.37			.46	.01						1.78
Cooperstown	Sheyenne		T.				.10						T.						T.		.12		.25			.40							0.87
Courtenay	James						.67						.11								.18		.19			.35							1.50
Devils Lake ¹⁵	Devils Lake				.02	.10					.02		.05	T.	.13		T.				.25	.25	.14	T.	.06	.26		T.					1.23
Edgeley	James				.04	.36					.02		.05	T.	.30	T.		.09		.03	.17	.05	.16			.05	.01					1.30	
Edmore	Devils Lake		.08		.12	T.					T.			.13		T.		.05		.33	T.	.05		.10	.28		.03						1.19
Ellendale	James				.05	.15					.23	.03	.14					.03		.14	.09	.11			.03								1.00
Fargo ¹⁵	Red.	T.	.03		.22	T.				T.	.12	.01	.04	.14				.03		.15	.07	.33		T.	.19								1.38
Forman	Sheyenne				.58						.17	.01		.24				.07		.20	.05	.18											1.50
Fullerton	James		.01		T.	.36					.24	.05	T.					.02		.08	.14	.10			.06								1.06
Gackle	do				.01	.05	T.													.06	.09												0.21
Grafton	Red.	.07	.02										.01	T.					T.		.08	.01	.15		.05	.33							0.72
Grand Forks Airport ³	do		.11		T.	.01	T.				.10	T.	T.	.22	T.	T.	T.	T.	T.	.37	.04	.27	T.	.01	.16	T.	.04						1.33
Hankinson ²	do	.59				.44								.27		.05				.10	.12	.07	.06	.13		.03							1.86
Hannah	Pembina																		.08		T.				.05	.11							0.24
Hillsboro	Red.	T.	.06		.04						.24	.02	.10	T.						.15		.78		.05	.46		T.						1.90
Jamestown Airport ³	James	T.	.01	.03	.09	.53					.14	.03		T.		.01	T.	.04		.10	.08	.20	T.	T.		.04	T.						1.27
Langdon	Pembina	.07	.01											.06				.07		.17					.15		T.					.01	0.54
Larimore	Red.				.06						T.	.06							.05	.06	.05	.60	.05	.07		.25							1.25
Lisbon	Sheyenne	.35			.44								.13		.08		.08		.01	.21	.03	.12	.11		.15								1.63
Mayville	Red.	T.		T.		.06					T.	.22	T.	.08	T.			.01		.16				.05	.37		T.						1.09
McHenry	James				.24						.04		.02				.03			.27		.31		.05	.23								1.19
McLeod	Sheyenne				.33						.08						.05			.45		.40		.12									1.43
Oakes ²	James	.28	T.	.04		.38							.18		.07		.05			.19		.14	.05		.05	.05							1.43
Park River	Red.										.03			T.				T.			.02	.08				.05							0.35
Pembina Airport ³	do		T.	.01	T.		T.	T.			.14			.06	T.	T.	.06		.06		.18	T.		.03	.05		.04		T.	T.			0.63
Petersburg	do	.02			.04		.14				T.	T.		.09	T.		.01	T.		.22		.55		.08	.13								1.28
Sharon	do	T.			.15						T.	.06		.05	T.			T.	.05		.20		.30		.15	.27		T.					1.23
Valley City	Sheyenne		T.		.38							.08	T.	.63						.05	.05	.20		.15		.10							1.57
Wahpeton	Red.	.15				.18					T.	.20	.17			.27			.04	.03	.18	.03	.39	.06		.06							1.76
Middle Division																																	
Ashley ³	Missouri	.09				.06						.02	.18		.13					.20	.17		.09	T.		.02							0.96
Bisbee	Devils Lake				.06	.01					.12				T.		.01		T.	.25	.04	.15	.09	T.	.01	.05							0.79
Bismarck Airport ¹⁵	Missouri		T.	T.			.18				.33	T.					.07		.14		.11			T.	.04		.19	T.					1.06
Bottineau ²	Mouse				.49						T.	T.			.06					.06		.22		.16		.16							1.15
Butte	do																			.06													1.10
Carson	Heart				.12	T.					.12	T.							.41		.20	.26	.07	T.	.04		.04						1.12
Center	Missouri				.12	.08					.08			.06				T.		.15	.20	.33			.10								1.20
Drake ²	Mouse				.63						.01				.04				.03	.21	.02	.10			.16								0.66
Dunseith	do				.47						.05				.15					.12	.21				.32								1.21
Eckman	do				.47						.05				.15					.12	.21				.32								0.66
Fessenden	James				.22						.12	.02							.20		.39	.27											0.94
Fort Yates	Missouri				.12	.35	.04				.12	.35	.04						.20		.05	.07			T.								0.83
Foxholm	Mouse				.58						.03	T.	.09						.05	.22		.05		.07	.10								1.19
Garrison ³	Missouri		.08		.02						.10				.10				.11	.21		.53		.05	.07	.05							1.29
Granville	Mouse				.56						.04			.12					.05		.05		.13		T.	.02	.24		T.	T.			1.06
Hansboro	Devils Lake														T.		.04	.04		.04	.16												0.54
Linton	Missouri				.01	.01	T.	.01			.15								.10		.14	.15	.08		.02	.24		T.					0.45
Maddock	Sheyenne				.37														.06		.24		.27	T.	.04	.20	T.	T.					1.33
Mandan ²	Missouri				.06						T.	.10	T.		.01				T.		.14		.37		T.	.04	.04	.02					0.73
Max ²	do				.46						.11		T.		.01				.14	.09		.61		.17									1.59
McClusky	do				.40									.05	.02				.05	.16	.03	.38			T.	.14							1.23
Minot Airport ³	Mouse		T.		.54	.41					.19	T.		.48		.05	.05		.05	.05	.07	.10	T.	T.	.04	T.							1.93
Mohall	do				.63						.19	T.		.06					.13		.28			T.	.39								1.68
Napoleon	Missouri		.02	.07	.01	.02					.06	.04		.60		.02			.19	.08	.13			.10		.10							1.39
New Salem	Heart				.02						.06	.01	T.	.02					.09	.23	.15		.01	.04	T.								0.96
Pettibone	James				.10																												

1.05
VT
66

Nat Hist Lib

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

SEP 8 1947
UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

Vol. LVI BISMARCK, N. D., JUNE 1947 No. 6

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GENERAL SUMMARY

June was a rainy, cool, month, with an average of 14 days with 0.01 inch or more of precipitation. The temperature averaged 3.2° below the normal with freezing temperatures general on the 1st and the 11th. Frosts were reported, but because of the backward season, little damage resulted to growing crops. This was the fifth wettest June since 1892, with the west portion receiving far the larger amounts of rainfall; in fact only in 1944 has the average for the west portion exceeded this years average of 7.17 inches. Local heavy showers caused some minor washing, and light hail caused some property damage. The rate of fall during the severe storm on the 3d at the Bismarck Airport exceeded all June records for periods from 10 minutes to 2 hours. The amounts were: 10 minutes 1.08 inches; 30 minutes 2.49 inches; 1 hour 2.67 inches and 2 hours 3.17 inches. The month was unusually cloudy with an average of seven tenths of cloudiness compared to a normal of five tenths; with the result that sunshine was 16% below the normal. All conditions, especially the abundant rainfall, combined to afford an excellent stand of all small grain with some early planted heading at the close of the month. Corn was backward because of the cool weather. Crop outlook, pastures and ranges were excellent at the close of the month.—M.S.C.

TEMPERATURE

The mean temperature for the state was 59.6°, or 3.2° below the 1892-1947 average for June. The mean temperature for the eastern division was 60.2°; for the middle division, 59.6°; and for the western division, 59.0°. The highest mean temperature was 63.0° at Linton, and the lowest, 55.8° at Edmore, making a range in mean temperature of 7.2°. The absolute range was 66°, from 90° at Hankinson on the 26th, to 24° at Edmore on the 1st. The average daily deficiency in temperature for the state since January 1, 1947, is 2.2°.

PRECIPITATION

The average precipitation for the state was 5.81 inches, or 2.29 inches more than the 1892-1947 average for June. In the eastern division the average amount was 4.55 inches; in the middle division, 5.72 inches; and in the western division, 7.17 inches. The greatest monthly amount reported was 10.09 inches at Richardson; the least was 2.73 inches at Petersburg. The greatest amount recorded in any 24 consecutive hours was 5.22 inches at Willow City on the 22d. The accumulated excess in precipitation for the state since January 1, 1947, is 0.55 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.20	12	29.32	22	11.9	45	n.w.	23	82	88	62	60	46	118
Devils Lake...	30.16	12	29.41	9	8.9	32	n.	10	87	59	61	41	166	
Fargo	30.18	12	29.16	10	12.5	49	se.	8	81	85	61	63	45	134
Williston.....	30.16	12	29.42	9	7.7	27	ne.	21	80	85	59	57	51	162

† And other dates.

COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	60.5	94	28	3.59	4.44	2.03	3.35	0	8	11	9	10	
1893...	67.4	103	33	3.25	4.28	2.60	3.38	0	9	13	10	7	
1894...	68.8	103	25	4.08	2.31	3.93	3.44	0	7	17	6	7	
1895...	59.7	97	29	5.37	4.54	4.11	4.67	0	12	8	13	9	
1896...	65.6	97	37	3.06	4.33	4.68	4.02	0	9	16	9	5	
1897...	61.7	109	20	4.40	4.40	2.45	3.75	0	9	11	10	9	
1898...	62.6	105	26	3.17	3.21	3.18	3.19	0	9	10	10	10	
1899...	62.2	105	30	3.20	4.25	3.98	3.81	0	10	12	11	7	
1900...	66.9	109	27	1.59	1.54	1.04	1.39	0	5	15	11	4	
1901...	61.6	95	22	7.20	5.31	5.90	6.14	0	15	10	11	9	
1902...	58.0	97	28	3.67	3.75	3.53	3.65	0	11	12	9	9	
1903...	62.4	96	27	1.02	1.52	1.78	1.44	0	4	17	8	5	
1904...	61.4	100	30	5.95	5.92	4.82	5.56	0	11	13	8	13	
1905...	59.7	97	32	4.49	4.64	3.87	4.33	0	12	10	7	9	
1906...	62.0	95	32	3.80	4.21	6.34	4.78	0	11	13	8	9	
1907...	61.9	95	25	3.47	2.53	2.80	2.93	0	10	12	10	8	
1908...	60.4	93	27	2.91	3.63	3.70	3.41	0	10	12	9	9	
1909...	62.9	98	28	3.94	2.49	3.92	3.45	0	10	12	11	7	
1910...	67.3	111	19	1.26	1.85	3.00	2.04	0	6	16	9	5	
1911...	66.9	108	25	3.13	3.42	2.61	3.05	0	9	13	10	7	
1912...	61.8	104	28	2.27	2.11	1.65	2.01	0	6	16	8	6	
1913...	65.8	101	27	2.85	1.98	2.52	2.45	0	8	16	9	5	
1914...	62.2	93	29	5.67	7.13	6.64	6.48	0	13	9	11	10	
1915...	56.7	94	20	5.59	5.11	3.73	4.81	0	12	9	12	9	
1916...	58.0	92	29	4.06	3.51	4.05	3.87	0	11	10	11	9	
1917...	59.7	103	19	2.38	1.88	1.96	2.07	0	8	13	11	6	
1918...	63.3	102	27	2.23	1.53	0.97	1.58	0	7	14	11	5	
1919...	67.2	108	22	3.15	1.99	1.50	2.21	0	5	15	10	5	
1920...	62.2	98	26	3.64	3.74	3.20	3.53	0	11	12	12	6	
1921...	68.2	108	30	3.28	2.83	4.74	3.62	0	9	14	10	6	
1922...	63.5	108	30	3.38	3.55	4.44	3.79	0	9	15	8	7	
1923...	66.1	100	30	4.79	2.83	4.21	3.94	0	8	13	12	5	
1924...	58.6	89	26	3.45	4.51	4.17	4.04	0	11	10	12	8	
1925...	61.5	98	30	7.72	5.43	4.84	6.00	0	14	11	10	9	
1926...	60.7	104	22	2.66	2.47	2.71	2.61	0	9	13	9	8	
1927...	61.2	99	22	3.81	2.34	2.80	2.82	0	9	11	13	6	
1928...	58.2	92	24	4.83	5.30	4.53	4.89	0	12	10	10	10	
1929...	61.4	98	21	1.10	1.10	2.12	1.44	0	7	16	9	5	
1930...	63.3	96	30	2.31	3.42	3.53	3.09	0	10	13	11	6	
1931...	68.4	110	27	2.93	2.05	2.07	2.35	0	8	14	10	6	
1932...	67.0	98	34	3.33	3.61	4.83	3.92	0	10	14	10	6	
1933...	70.7	110	33	1.99	1.66	1.67	1.77	0	7	18	10	2	
1934...	64.3	100	29	3.74	2.85	2.54	3.04	0	11	12	10	8	
1935...	60.3	99	25	3.65	2.70	2.77	3.04	T.	10	11	12	7	
1936...	66.4	110	28	1.41	1.40	1.20	1.34	0	6	16	10	4	
1937...	63.5	109	25	3.04	5.62	3.43	4.03	T.	7	15	9	6	
1938...	64.2	99	27	1.82	2.87	3.49	2.73	0	9	11	11	8	
1939...	60.1	99	29	5.44	4.67	3.67	4.59	0	12	10	11	9	
1940...	63.1	102	27	2.02	2.10	2.60	2.24	0	9	13	11	6	
1941...	64.2	97	32	5.86	4.91	5.85	5.54	0	12	12	9	9	
1942...	60.1	90	27	2.81	2.81	3.75	3.12	0	11	9	12	9	
1943...	60.4	102	28	4.61	5.07	5.54	5.07	1.3	13	8	11	11	
1944...	61.7	93	30	4.25	7.10	7.94	6.43	0	13	10	9	11	
1945...	57.5	99	28	2.26	2.41	2.77	2.48	0	11	8	12	10	
1946...	63.2	100	26	3.65	2.86	2.66	3.06	0	10	10	14	6	
1947...	59.6	90	24	4.55	5.72	7.17	5.81	T.	14	7	12	11	
Period	62.8	111	19	3.55	3.49	3.53	3.52	T.	9	13	10	7	

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Climatological Data for June 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days			Prevailing direction of wind	Observer						
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear			Pt. cloudy	Cloudy				
Eastern Division																								
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	66.2	.....	82	26	34	1	4.17	.....	1.09	10	0	15	13	10	7	se.	Albert Thoren.		
Carrington	Foster	1,579	50	59.8	-3.6	78	13	35	11	5.71	+2.26	1.55	23	0	16	6	8	16	.....	Soo Line Agent.			
Casselton	Cass	934	52	61.4	-2.5	86	26	39	11	5.01	+1.42	2.37	9-10	0	11	6	10	14	se.	Ashton Lockhart				
Cavalier	Pembina	894	40	58.6	-4.0	80	13	39	11	6.02	+2.94	1.03	24	0	16	8	8	14	se.	City Light & Power Co.				
Colgate	Steele	1,180	14	.....	.....	.....	.....	.....	.....	4.37	+0.89	1.67	9-10	0	8	8	11	11	s.	O. M. Jensen.
Cooperstown	Griggs	1,428	51	59.6	-3.6	80	26	36	11	4.45	+1.18	0.96	7	0	15	6	8	16	ne.	R. J. Lockner				
Courtenay	Stutsman	1,523	17	.....	.....	.....	.....	.....	.....	3.50	+0.30	1.07	7	0	13	8	8	14	n.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	59.8	-2.1	78	13	32	1	3.08	-0.43	1.18	22	0	14	4	9	17	se.	U. S. Weather Bureau.				
Edgeley, 2 miles S.	LaMoure	1,568	47	60.6	-3.0	82	26	36	11	3.40	-0.27	1.23	10	0	12	9	16	5	s.	N. Dak. Agri. Exp. Sta.				
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	55.8	-6.5	78	3	24	1	4.78	+1.67	1.20	4	0	15	15	3	12	se.	Mike Davis.				
Ellendale	Dickey	1,457	49	60.9	-3.9	84	26	38	11	4.93	+1.52	2.47	12	0	12	9	4	17	ne.	J. E. Demmer.				
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	61.4	-3.0	86	26	37	2	3.23	-0.82	1.00	9-10	T.	14	3	7	20	se.	U. S. Weather Bureau.				
Forman	Sargent	1,249	56	62.4	-2.6	88	26	40	11	5.11	+1.51	2.60	10	0	9	7	17	6	se.	Art Waterman.				
Fullerton	Dickey	1,439	50	61.7	-2.5	82	26	38	1	4.09	+0.18	1.92	10	0	11	9	11	10	ne.	F. O. Alin.				
Gackle	Logan	1,951	17	60.2	-3.1	81	26	36	1	5.81	+2.34	1.44	22	0	10	5	12	13	s.	Tony Martin.				
Grafton	Walsh	827	56	60.9	-2.8	81	26	34	1	4.89	+1.64	1.72	3-4	0	14	7	10	13	s.	Dr. J. C. Lamont.				
Grand Forks, 2 miles W.	Grand Forks	830	57	61.4	-2.0	83	26	39	1	5.97	+2.69	2.55	10	0	14	4	12	14	sw.	University of N. Dak.				
Grand Forks Airt., 2 1/2 mi. W	Grand Forks	834	7	60.0	.....	82	26	36	1	6.38	.....	2.36	10	0	13	3	7	20	se.	U. S. Airway Comm. Sta.		
Hankinson	Richland	1,063	19	61.6	-5.3	90	26	38	2	3.99	+0.41	1.73	11	0	10	9	6	15	nw.	Soo Line Agent.				
Hannah	Cavalier	1,568	54	57.8	-2.7	77	18	27	1	4.18	+0.77	1.32	3-4	0	14	4	17	9	se.	A. E. Prior.				
Hillsboro	Trails	901	42	61.6	-3.1	83	26	38	11	4.30	+0.88	2.02	9-10	0	10	5	16	9	ne.	Alfred Jahnke.				
Jamestown, 2 miles SE	Stutsman	1,457	56	61.1	-2.6	84	26	38	1	4.38	+0.88	1.70	10	0	12	3	14	13	se.	N. Dak. State Hospital.				
Jamestown Airport, 2 mi. NE	Stutsman	1,491	7	59.7	.....	80	31	37	11	4.05	.....	1.00	9-10	0	12	3	7	20	se.	U. S. Airway Comm. Sta.		
Kensal, 7 miles SW	Stutsman	1,440	1	59.6	.....	79	26	35	11	5.41	.....	1.37	21-22	0	14	6	11	13	se.	U. S. Wildlife Refuge.		
LaMoure	LaMoure	1,115	52	58.1	-2.5	80	13	25	1	5.66	+2.42	0.94	21-22	0	16	9	8	13	se.	Andrew Remick				
Langdon, 1 1/2 mile SE	Cavalier	1,134	55	59.8	-3.1	81	26	35	1	3.25	-0.31	1.24	10	0	13	7	7	16	nw.	V. Sturlaugson.				
Larimore	Grand Forks	1,091	44	60.3	-4.1	84	26	39	12	5.58	+1.65	1.45	11	0	14	8	6	16	nw.	Jesse P. Phillips.				
Lisbon	Ransom	975	52	61.2	-3.3	83	26	39	11	4.27	+0.90	1.57	10	0	13	4	16	10	ne.	J. O. Halverson.				
Mayville	Eddy	1,509	25	58.4	-3.4	78	26	33	1	3.63	+0.16	1.18	3	0	14	8	10	12	se.	H. A. Ragaz.				
McLeod, 3 miles E.	Richland	1,075	36	61.8	-3.5	86	26	37	2	5.15	+1.32	2.12	10-11	0	11	14	7	9	se.	C. E. Blasky.				
Munich, 3 1/2 miles SW	Cavalier	1,598	19	62.5	-2.8	88	26	39	11	4.76	+1.12	1.53	11	0	15	7	10	13	se.	J. G. Carlson.				
Oakes	Dickey	1,318	44	59.5	-3.6	80	19	33	1	3.76	+0.50	0.64	3-4	0	15	15	4	11	se.	Harold Feldner				
Park River	Walsh	998	74	59.8	-3.0	79	17	34	1	6.58	+3.89	1.73	3-4	0	16	3	12	15	ne.	C. M. Hagen.				
Pembina Airport, 1 mile S.	Pembina	795	44	59.8	-3.0	79	17	34	1	6.58	+3.89	1.73	3-4	0	16	3	12	15	ne.	Martin Severson.				
Petersburg	Nelson	1,524	17	58.2	-4.3	78	26	33	1	2.73	-0.77	0.61	4	0	12	11	11	8	se.	U. S. Airway Comm. Sta.				
Sharon	Steele	1,516	24	58.7	-4.3	78	26	35	11	3.71	+0.10	1.10	10	0	15	9	6	15	se.	T. C. Overland.				
Valley City	Barnes	1,229	43	61.8	-2.3	84	26	37	11	3.68	+0.13	1.45	10	0	11	8	13	9	w.	Hugh Lyon.				
Wahpeton	Richland	962	56	62.3	-3.5	85	26	39	1	4.01	+0.43	2.25	9-10	0	13	10	13	7	se.	Miss I. C. Robertson.				
Average for Eastern Division																			13	7	10	13	se.	State School of Science.
Middle Division																								
Ashley, 1 mile SE	McIntosh	2,025	52	60.1	-3.1	86	3	32	1	3.94	+0.52	0.91	11	0	14	5	10	15	se.	Eddie H. Glur.				
Belcourt	Rolette	1,960	3	.....	.....	.....	.....	.....	.....	5.42	.....	0.95	22	0	15	4	13	13	se.	Turtle Mt. Indian Agency.
Bisbee	Towner	1,601	45	59.3	-2.8	80	18	30	1	5.40	+2.04	1.30	23	0	13	8	10	12	s.	Robert L. Peterson.				
Bismarck	Burleigh	1,670	73	61.2	-3.0	82	3	39	11	6.80	+3.57	1.93	3	0	19	1	9	20	se.	U. S. Weather Bureau.				
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	8	61.8	-1.1	85	3	39	11	8.29	+4.94	3.25	3	0	18	1	9	20	se.	U. S. Weather Bureau.				
Bottineau	Bottineau	1,638	56	59.0	-2.8	80	13	26	1	6.83	+3.64	3.05	23	0	13	1	22	7	se.	N. D. School of Forestry.				
Butte, 3 miles WSW	McLean	1,880	23	59.1	-3.4	77	13	38	11	6.55	+3.15	1.10	22	0	14	8	9	13	se.	R. L. Williams.				
Carson, 2 1/2 miles SW	Grant	2,500	36	60.2	-3.5	82	3	32	11	7.31	+3.83	1.80	21	0	15	5	19	6	se.	J. W. Evans.				
Center	Oliver	2,100	10	58.4	.....	81	3	33	11	5.19	.....	1.20	22	0	18	7	19	4	nw.	Fred L. Heinz.		
Drake	McHenry	1,634	18	60.4	-3.4	80	13	23	11	5.73	+2.57	2.25	22-23	0	15	13	15	2	se.	Geo. A. Paulus.				
Dunseith, 2 miles NNE	Rolette	1,682	52	58.3	-3.1	78	19	34	1	4.29	+1.28	2.22	22	0	16	1	16	13	se.	State Tuberculosis San.				
Eckman	Bottineau	1,500	42	59.0	-3.0	81	13	29	1	5.17	+2.19	3.00	22-23	0	11	6	16	8	se.	E. R. Sherman.				
Fessenden	Wells	1,610	36	60.0	-2.6	79	13	34	11	4.97	+1.49	1.15	22	0	13	10	17	3	se.	John V. Zuber.				
Fort Yates	Sioux	1,670	48	61.9	-4.7	83	25	36	12	4.06	+0.59	1.00	22	0	11	10	12	8	se.	P. J. Jacobson.				
Foxholm, 6 1/2 miles NE	Ward	1,609	27	60.0	-1.9	80	13	35	11	5.81	+2.83	1.62	22-23	0	10	7	9	14	nw.	U. S. Wildlife Refuge.				
Garrison	McLean	1,911	71	59.8	-3.1	82	13	34	11	7.11	+3.69	2.29	22-23	0	14	2	11	17	s.	Mae H. Vorachek.				
Granville	McHenry	1,504	41	59.4	-3.3	82	13	33	1	5.39	+2.20	1.62	22-23	0	13	15	6	9	se.	Fred Roble.				
Hansboro	Towner	1,597	40	57.5	-3.3	78	18	30	11	4.39	+1.07	1.11	22-23	0	14	4	13	13	se.	W. E. Discher.				
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	.....	.....	.....	.....	5.64	+2.27	1.40	22-23	0	14	6	10	14	se.	H. J. Reynolds.
Leeds	Benson	1,515	7	59.7	.....	81	13	30	1	3.86	.....	0.66	22	0	16	7	14	9	se.	John Dalmage.		
Linton	Emmons	1,711	31	63.0	-2.2	83	3	38	11	5.40	+2.13	2.20	21-22	0	13	5	8	17	se.	Wm. Heyerman.				
Maddock, 1 mile E	Benson	1,604	33	60.4	-1.8	80	13	32	1	4.57	+1.18	1.22	16	0	13	6	12	12	nw.	Benson Cy. A. & T. Sch.				
Mandan, 1 1/2 miles SW	Morton	1,750	34	60.4	-4.0	82	3	37	11	7.65	+4.37	2.23	3	0	16	4	4	22	nw.	No. Gt. Plains Field Sta.				
Max	McLean	2,093	19	58.8	-4.8	80																		

Climatological Data for June 1947—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours 4	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Dunn Center	Dunn	2,191	49	58.4	-4.1	80	14	33	11	8.69	+4.99	2.00	23	0	14	1	16	13	se.	O. T. Evenson.
Elbowoods	McLean	2,082	55	60.0	-3.4	83	13	30	11	7.77	+4.09	2.27	20-21	0	14	10	14	6	nw.	H. W. Case.
Epping	Williams	2,224	39	59.6	-3.5	81	13†	33	11	5.11	+1.80	1.95	20-21	0	13	10	11	9	nw.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	19							7.77	+4.04	1.68	20-21	0	15	7	12	11	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	30	58.6		81	25	34	11	8.41	+4.99	1.80	21	0	18	8	11	11	nw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	7	57.8	-4.8	81	25	33	11	6.91	+3.32	1.05	22-23	0	14	6	9	15	nw.	Chester K. Puda.
Grenora	Williams	2,114	39	59.6	-1.4	83	19	33	11	4.12	+1.16	0.93	20	0	16	9	15	6	se.	L. D. Nielson.
Halliday	Dunn	2,073	6							8.45		2.44	20-21	0	16	7	16	7	nw.	John Kisse.
Hettinger	Adams	2,675	41	59.2	-4.8	84	8	32	11	8.29	+5.13	2.48	20-21	0	17	9	11	10	nw.	Edgar Martin.
Kenmare	Ward	1,799	16	59.8	-2.6	86	13	36	11	8.74	+5.85	2.81	20-21	0	13	8	8	14	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	60.8	-2.6	84	8	33	11	7.73	+4.60	1.45	21	0	15	11	7	12	nw.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	33	58.4		81	2†	34	11	8.26	+4.84	1.66	6	0	12	18	3	9	.....	Harry Roberts.
Mott	Hettinger	2,424	41	60.0	-5.0	83	25	32	10	5.25	+2.00	1.37	20-21	0	16	6	13	11	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	59.9	-3.7	83	25	37	11	8.51	+5.35	2.14	22-23	0	19	4	18	8	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn		6	58.8		80	7	36	11	8.27		1.88	21	0	20	5	16	9	w.	Peter F. Ficek.
Parshall	Mountrail	1,929	33	58.9	-3.1	80	13	32	11	6.79	+3.30	1.95	21	0	20	0	26	4	ne.	C. E. Shubert.
Portal	Burke	1,954	34	57.7	-2.9	85	15	31	11	7.42	+4.33	2.00	21-22	0	17	6	13	11	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	43																	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	32	59.2	-3.9	80	25	35	11	10.09	+6.62	3.12	20-21	0	16	6	16	8	se.	Assumption Abbey.
Ryder	Ward	2,108	19							6.15	+3.04	1.60	21-22	0	13	4	9	17	ne.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	58.3	-5.0	81	13	31	11	7.10	+3.73	2.48	23	0	17	9	9	12	w.	H. J. Bugge.
Stanley	Mountrail	2,258	10	58.1		81	13†	36	10†	6.25		2.14	20-21	0	14	2	18	10	se.	Leroy Edwards.
Tagus	Mountrail	2,179	19							5.68	+2.63	2.55	20-21	0	17	7	14	9	ne.	Geo. N. Pilgard.
Tioga	Williams	2,279	19							4.83	+1.77	2.02	20-21	0	7	15	8	7	sw.	L. A. Simon.
Trotters	Golden Valley		22							6.17	+2.84	1.63	20-21	0	17	0	22	8	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	59.0		81	13	32	11	6.83		1.85	20-21	0	15	7	13	10	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	35	60.2	-2.9	82	25	34	11	7.48	+4.33	1.78	6-7	0	19	7	16	7	w.	J. C. Zeller.
Wildrose	Williams	2,258	18							4.62	+1.52	1.33	21	0	19	7	18	5	nw.	Jonathan Winkjer.
Williston	Williams	1,878	69	59.9	-2.8	82	25	34	11	5.03	+1.60	1.75	20-21	0	14	4	9	17	se.	U. S. Weather Bureau.
Average for Western Division				59.0	-3.7	86	13	30	11	7.17	+3.64	3.12	20-21	0	16	7	13	10	nw.	
Average for the State				59.6	-3.2	90	26	24	1	5.81	+2.29	5.22	22	T.	14	7	12	11	se.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
⁴ Best available used for stations not equipped with recorders.

Daily Temperatures for June 1947																																	
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum	67	70	86	78	70	71	70	76	71	59	61	61	77	75	75	76	70	74	76	73	66	75	63	75	79	82	74	75	69	76	72.3	
	Minimum	32	45	45	56	51	45	50	47	41	39	37	37	41	46	50	52	55	52	51	51	57	59	50	47	39	57	51	44	52	47.9		
Bismarck Airport	Maximum	64	71	85	68	65	70	71	67	64	59	65	67	81	79	78	76	69	74	79	77	69	72	69	62	82	82	75	74	69	77	72.3	
	Minimum	42	43	48	57	51	46	55	54	44	41	39	40	43	49	57	57	56	57	54	63	64	55	52	49	47	57	59	53	46	54	51.2	
Bottineau	Maximum	66	66	67	68	64	69	77	78	60	58	68	73	80	79	76	73	78	79	78	70	64	58	69	72	72	75	75	76	72	72	71.2	
	Minimum	26	46	46	52	49	40	47	55	41	35	31	37	43	48	52	53	49	53	54	58	60	55	50	44	44	54	51	48	40	47	46.9	
Carson	Maximum	67	73	82	71	71	70	72	75	65	56	63	65	77	80	79	74	69	63	75	72	67	62	68	70	80	80	74	78	68	73	71.3	
	Minimum	40	46	50	56	51	48	49	51	48	38	32	41	41	50	53	52	55	55	52	60	60	50	48	47	60	53	53	49	40	49	49.2	
Crosby/	Maximum	58	72	72	62	57	76	75	64	47	57	67	75	81	77	75	73	74	72	81	62	54	57	65	66	75	73	71	59	69	72	68.1	
	Minimum	36	42	48	52	49	44	50	54	45	35	32	38	46	52	45	45	40	52	55	56	48	48	49	47	52	49	54	50	38	46	46.8	
Devils Lake	Maximum	63	68	72	64	55	66	70	66	59	52	67	72	78	78	77	71	74	78	74	74	76	63	74	74	77	75	72	73	74	70.5		
	Minimum	32	46	48	52	46	38	50	52	44	40	36	44	47	43	53	55	48	50	54	58	61	61	53	48	46	57	55	53	50	54	49.1	
Dickinson Airport	Maximum	63	76	77	62	69	70	72	74	57	56	65	68	76	78	80	73	64	65	75	68	55	52	68	67	80	75	70	67	64	71	68.6	
	Minimum	41	46	50	53	51	49	51	53	40	38	34	39	44	47	49	50	54	55	54	55	50	47	47	48	46	53	52	45	41	46	47.6	
Dunn Center/	Maximum	62	75	75	65	67	68	74	66	59	57	63	69	79	80	79	74	69	63	75	66	55	53	68	68	79	75	73	67	69	72	68.8	
	Minimum	42	46	48	50	52	46	51	53	52	39	33	35	47	47	48	50	55	56	54	56	52	50	52	47	41	43	55	50	38	49	47.9	
Fargo Airport	Maximum	62	65	74	74	58	63	62	69	78	58	62	65	75	74	73	72	76	78	77	76	70	74	67	78	77	86	76	79	72	70	71.3	
	Minimum	39	37	49	55	52	50	51	44	58	41	41	40	46	48	49	58	53	50	60	59	62	62	56	52	50	60	56	56	51	57	51.4	
Fessenden	Maximum	65	68	78	65	58	61	71	70	62	54	67	70	79	76	73	75	72	76	76	76	71	77	68	75	76	77	74	72	72	74	70.9	
	Minimum	35	46	45	56	50	42	48	57	46	37	34	40	43	48	53	55	52	50	55	59	60	60	52	47	46	58	57	54	44	53	49.2	
Fullerton	Maximum	66	68	77	77	68	65	65	75	78	61	63	60	75	75	75	72	77	76	75	69	79	67	81	82	75	74	75	74	70	75	72.6	
	Minimum	38	39	50	61	55	49	47	45	59	40	39	41	43	46	51	55	57	51	54	59	61	62	53	48	48	59	58	54	48	53	50.8	
Garrissou	Maximum	63	70	78	64	62	72	75	64	58	58	66	72	82	81	77	74	72	79	76	74	66	62	67	72	80	76	72	72	73	75	71.0	
	Minimum	41	46	45	55	48	44	52	55	42	39	34	39	49	47	54	54	51	53	54	61	62	52	51	48	45	53	55	47	41	52	48.6	
Golva	Maximum	61	76	78	65	72	71	74	76	58	62	59	68	76	76	76	71	61	63	80	62	59	51	70	67	81	78	71	67	63	72	69.0	
	Minimum	44	56	54	51	48	44	51	52	44	39	33	34	46	45	43	45	56	53	52	52	47	45	47	50	43	46	50	41	38	47	46.6	
Grafton	Maximum	63	67	68	68	59	69	71	61	54	66	71	71	78	76	75	73	77	78	78	78	75	72	72	74	74	81	76	75	74	74	71.4	
	Minimum	34	45	43	55	52	38	43	47	53	41	40	41	46	45	50	56	57	50	56	58	61	56	57	48	58	58	57	52	56	50.4		
Grand Forks Airport	Maximum	61	66	67	63	56	61	70	70	67	48	63	69	76	75	74	68	78	79	77	75	71	73	67	75	75	82	76	77	73	72	70.1	
	Minimum	36	43	46	53	48	43	49	46	45	40	37	40	44	47	49	56	53	51	57	58	63	62	56	50	49	57	53	54	50	55	49.8	
Jamestown Airport	Maximum	63	69	80	73	59	60	64	67	72	47	63	68	79	74	70	74	70	76	75	73	67	78	62	77	77	80	72	75	71	74	70.3	
	Minimum	38	43	49	57	51	41	51	44	46	40	37	38	43	43	51	52	54	50	57	59	60	57	53	48	48	56	56	52	47	53	49.1	
Kenmare/	Maximum	61	68	73	60	61	73	83	62	48	60	69	76	86	80	81	79	74	76	80	66	55	54	67	68	75	74	74	65	73	76	69.9	
	Minimum	37	47	49	52	49	43	50	55	47	38	36	45	53	51	52	52	49	52	57	62	52	51	50	48	46	56	58	54	45	52	49.6	
Langdon	Maximum	64	67	68	65	54	59	67	71	60	59	69	71	80	75	76	72	74	78	75	73	70	70	68	71	72	76	71	72	70	72	69.2	
	Minimum	25	42	45	43	47	38	48	49	44	36	30	40	43	42	54	54	50	47	53	54	58	60	53	47	42	54	51	53	47	52	47.0	
Marmarth	Maximum	65	78	82	73	78	76	76	84	72	60	63	67	75	80	81	74	68	63	83	79	58	53	72	70	83	81	78	71	65	73	72.8	
	Minimum	45	43	54	56	54	55	48	55	52	40	33	35	38	45	40	52	55	55	55	58	52	47	58	48	46	53	53	48	43	45	48.7	
Minot Airport	Maximum	61	65	73	63	62	70	76	66	58	57	66	72	80	77	74	73	69	75	77	73	62	56	65	67	74	75	75	69	72	72	69.1	
	Minimum	35	49	50	52	48	42	51	58	41	38	37	43	52	50	56	55	50	52	57	60	54	52	50	48	47	48	58	48	43	53	49.6	
Mott	Maximum	68	75	81	75	71	72	73	79	75	58	62	66	78	82	79	73	70	64	75	73	61	60	71	70	83	82	75	70	66	74	72.0	
	Minimum	40	45	53	57	50	45	50	51	50	32	34	36	41	45	49	50	54	56	58	59	55	49	48	45	44	52	55	48	40	47	47.9	
Pembina Airport	Maximum	62	67	70	59	55	61	70	73	60	50	68	73	76	76	76	74	79	75	77	77	76	73	72	60	78	74	78	72	74	75	70.0	
	Minimum	34	45	46	54	47	46	49	50	44	41	37	41	43	43	52	56	56	49	53	59	62	61	55	52	50	55	51	53	52	53	49.6	
Sharon	Maximum	61	64	68	70	60	57	65	62	54	50	63	66	76	74	70	65	73	76	74	72	65	74	72	78	74	72	78	72	73	71	71	68.2
	Minimum	36	44	44	54	50	45	47	46	50	38	35	40	44	46	48	55	52	54	54	55	60	61	52	46	47	58	55	55	49	55	49.2	
Steele	Maximum	62	69	83	67	60	67	63	70	66	55	64	66	77	75	79	76	75	77	76	77	68	77	64	76	79	79	76	74	69	74	71.4	
	Minimum	36	45	48	54	53	40	50	47	46	50	37	34	37	40	45	43	55	52	49	52	59	61	60	50	43	42	55	57	53	41	51	48.0
Valley City	Maximum	65	65	77	76	69	60	63	68	73	69	62	63	75	75	73	70	72	78	76	75	73	76	73	76	77	84	81	76	74	71	72.5	
	Minimum	40	41	49	56	54	50	52	42	62	41	37	43	45	48	50	57	57	53	56	57	60	63	54	54	51	60	56	52	50	55	51.1	
Wahpeton	Maximum	70	66	78	80	76	66	67	71	81	69	63	67	73	74	73	74	75	79	78	76	74	73	71	81	78	85	85	78	72	70	73.8	
	Minimum	39	41	50	54	54	45	52	44	61	44	40	40	48	47	50	51	54	52	57	45	51	64	55									

Daily Precipitation for June 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James			1.30	.07	.25	.47	.01	.07	.14	.07					T.	.48	T.					.10	.19	1.55	.09	.22	T.	.63	T.		.07	5.71	
Casselton	Red.		T.	.01	1.03	.05	T.	.80	T.	.18	2.37	T.											.04	.06	.01	.22	T.				.24	5.01		
Copertown	Sheyenne			.18	.57	.58		.96	.06	.03	.60						.44			10			.08	.28	.05	.03	T.			.41		.08	4.45	
Courtenay	James			.15	.58	.15		1.07	.04	.04	.44						.11						.10	.29	.03	T.			.33		.17	3.50		
Devils Lake ^{1 5}	Devils Lake			.02	.05	.01			.12	.12	.01						.09	.15		T.			.04	1.18	.07	.02	T.			.37		.83	3.08	
Edmore	Devils Lake			.32	.02			.19	T.	.24	1.23						.31	.01					.38	.17	.07		T.			.18		.28	3.40	
Ellendale	James		T.	.22	1.20	.03			.10	.52	.04						.03	.50					.29	.39	.32	.22	T.		.10	.58	T.	.24	4.78	
Fargo ^{1 5}	Red.		T.	.02	.93	.02		.42	.28	.15	.86						.05						.50	.29	.04	.66		T.		T.	.02	.32	4.93	
Forman	Sheyenne			.61	.14			.55		.25	2.60	.02		.13						.04			.03	.08	.02	.15	T.		T.			.10	3.23	
Fullerton	James			T.	.17	.09		.56	.46	T.	1.92		T.				.09						.39	.11		.07			.02		.36	5.11		
Gackle	do			.14	.43	.21		.59	.21		.76						.24						1.44	.01				.57		.25		4.00		
Grafton	Red.			.11	1.61	T.			.05	.46	.89	.04					.18				T.		.13	.77	.06	.07		.15	.24		.13	5.81		
Grand Forks Airport ³	do			.83	.46	T.			.15	.05	2.36								.06		T.		.11	.30	.09	.65		T.	.13			.18	6.58	
Hankinson ²	do			.14	.47	.09	.02	.18	.05	.37	.75	1.73					1.01		T.														3.99	
Hannah	Pembina			.27	1.05	T.			.05	.30	.08						T.	.24	.02				.06	.70	.19			.65	.15			.07	4.18	
Hillsboro	Red.			.12	1.15	T.		.25	.05		2.02						.15	T.					.10	.16	.10		T.		T.		.20	4.30		
Jamestown Airport ³	James		T.	.25	.06	.13		.78	.15	.07	.94						T.	.43					T.	.08	.60	T.		T.		.38		.18	4.05	
Jangdon	Pembina			.16	.90	.20			.07	.70	.12						.03	.45		.18				.60	.94	.31	.06	.54	.65		.20	.07	5.66	
Larimore	Red.			.22	.38			.08	.08	.21	1.24						.10						.12	.35	.03	.12			.11		.11	.32	3.25	
Lisbon	Sheyenne			.12	.20	.05		.59	.33	.78	1.45								.01	.18				.32	.25			.14	.01		T.	.22	.11	5.58
Mayville	Red.			.04	1.34	.01		.21	.04	.04	1.57						.23	.05					.08	.19	.07						.40	4.27		
McHenry	James			.91	.27	.07		.02	.03	.15	.19						.50						.15	.18	.05	.40			.33		.36	3.63		
McLeod	Sheyenne		.86	T.	.06	.05		.52		.29		.2	1.2										.16	.21		.08		.22			.58	5.15		
Oakes ²	James			.18	.30	.05	.54		.33	1.15	1.53							.09					.20	.12			.05			.03		.19	4.76	
Park River	Red.			.34	.64	.05		.05	.60	.54							.11						.24	.48	.05	.19		.06	.34	.04	.03	3.76		
Pembina Airport ³	do			1.15	.64	.05			1.64	.13							.55	.01					.16	.85	.15	.96	.02	.74	.31	T.		.08	6.58	
Petersburg	do			.15	.61				.06	.45	.31						.12						.15	.27	.21	.12					.05	2.73		
Sharon	do			.20	1.05	.02		.06	.08	.05	1.10						.06			T.	.05		.08	.20	.10	.20		T.	.30			.16	3.71	
Valley City	Sheyenne		T.	.09	.48	.12		.08	.02	1.31	.45			T.			T.	.02					.01	.24							.14	3.68		
Wahpeton	Red.			T.	.69	.03		.26		.23	.25	.05			.04								.02	.21		.01	.02	.08				.12	4.01	
Middle Division																																		
Ashley ³	Missouri				.25	T.		.15		.25	.81	.91	T.				.01		.02			T.	.06	.06	.67	.04			.43	.05		.23	3.94	
Bisbee	Devils Lake			.02	.62				.02	.64	.02						.72	.21					.24	.62	1.30			.24	.64		.11		5.40	
Bismarck Airport ^{1 5}	Missouri		.01	.3	.25	.02	.40	.30	.22	.08	.28	.40					.30	T.		T.			.47	1.14	.05	.29		.02	.75		.02	.29	8.29	
Bottineau ²	Mouse			.03	.88	.05	T.		.50	.13	.33	.59					.20	.14					.15	1.25	3.05	.06		.87		T.		.03	6.83	
Butte	do			.03	.88	.27			.50	.13	.33	.59					.54	.67					.22	1.10	1.02	.06	T.				.21	6.55		
Carson	Heart			.04	T.	.29		.72	.27	.39	.72						.36	.08	.07	.04			1.80	1.42	.16	T.			.80		.15	7.81		
Center	Missouri		T.		.05	.30	.30		.10	.88	.10						.15		.07	T.	.06	.14	.86	1.20	.05	.10	.11	.40		.15	.17	5.19		
Drake ²	Mouse			.03	.13	.05	.04		.13	.46							.58	.85						.52	.25	.38	.13		.04	.05		.09	5.73	
Dunseith	do			.03	.02	.03		.48	.27	.05							.20					.01	.08	2.22	.02	.07		.57	.01	.01	.22	4.29		
Eckman	do				.08	.05			.43	.29							.17	.20					.40		3.00	.20	.05	.30				.09	5.17	
Fessenden	James			.56	.03	.22		.10		.26							.52	.56					1.18	.15	.64	.24		.32			.24	4.97		
Fort Yates	Missouri			.11		.30		.42	.40		.75						.05	T.	.18				.10	1.00				.50		.25		4.06		
Foxholm	Mouse		T.	.02	.31				.04	.38	.23							.25					1.48	1.30	1.62			T.	T.		.18	5.81		
Garrison ³	Missouri		.09	T.	.68	.39		.08	.31						.18	.79	.48					1.33	1.41	1.01			.07	.08		.21	7.11			
Granville	Mouse				.47			.47	.07	.37	.28					.76	.25					.49	.75	1.62	.02				.05	.13	.13	5.89		
Hansboro	Devils Lake			.07	.70	T.		.06	.46	.03							.16	.60	1.11	.32	.02	.28		.16	.11	.32	.02	.28		.16	.03	.39	4.39	
Linton	Missouri			.27	.19		.51	.26		.47							.07	.52	.01				.10	2.20	.05			.61		.14		5.40		
Maddock	Sheyenne			.05	.03	.25		.05	.39	.20						.35	1.22	.29					.08	.67	.59			.18			.35	4.57		
Mandan ²	Missouri		T.	T.	.2	.23	.47	T.	.54	.05	.02	.69	.06			T.	.21	.40	T.				.08	.64	.96	T.	.29	.02	.80	T.	.19	7.65		
Max ²	do			T.	.35	.04		.82	.07								.73						.17	1.23	.90	.06		.01	.02	.08		.16	4.64	
McClusky	do			.40		.78		.95	.45		.47						.72	.43					.2	1.12	.08	.14	.08	T.	.27		.05	6.59		
Minot Airport ³	Mouse		T.	T.	T.	T.		.07	.66	.07				.25	.14	T.	T.	T.	T.	T.		.2	1.31	.91	.91	.09	T.	.11	.01	T.	.32	6.45		
Mohall	do			T.	.01	.24		.04	.63	.15					.09	.12					.01	1.06	1.56	1.16	.05		.22	.06		.09	5.49			
Napoleon	Missouri		.01		2.00	.09		.84	.26	.02	.40					.21	.06						.06	.64	.08	T.		1.38			.26	6.31		
New Salem	Heart			.03		.54	T.	.87	.02	.23	.37				T.	.46	.03		.01				.42	1.20	.52	.02		.89			.25	5.86		
Pettibone	James			.33	.22	.54		1.06	.11	.11	.36					.15	.79						.08	1.08	.10	.08		.02	.59		.21	5.83		
Rolla	Devils Lake			.21	.62	.01			.04	.61	.24	T.				.03	.26	T.					.27	.85	.63	.09	T.	.43		.01	.03	.31	4.64	
Rugby	Mouse			.05	.02	.28			.25	.35						.46	.33						T.	1.90	.55	.14	T.		.15	.07		.12	4.67	
Selfridge	Missouri		T.	.03	.70			1.24	.20	.70	.09				.04	.11		.22	T.			T.	1.20	.82	T.	.52		.64		.10	.03	6.64		
Steele	do		.04	.02	.78	.17	.01	1.61	.25	.25	.52	T.				.24						.08	.71	.04	.08	.01	.02	.63		.26		5.72		
Turner	Mouse			T.	.27			T.	.48	.38						.54	.30						.55	.26	.26	T.		.21		.21		.13	5.12	
Turtle Lake	Missouri			.02	.04	.51		.19	.25	.25	.10					.66	.44						1.85	.28	.10	.05	.10	.14			.20	6.28		

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

1 Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 8-27-47-1200]

1.05
NT
67

Mat Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

SEP 16 1947

NORTH DAKOTA SECTION

28

F. J. BAVENDICK

VOL. LVI BISMARCK, N. D., JULY 1947 No. 7

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GENERAL SUMMARY

The July temperature averaged above the normal but it was slightly cooler than July, 1946. The hottest period occurred from the 24th to the 28th, with the coolest period from the 18th to the 22nd. Precipitation was slightly below normal in all sections and occurred mostly as thundershowers on the 4th, 10th-12th, 17th and 25-26th. Sunshine was considerably above normal in the western part of the state. Due to the heavy precipitation during June and the favorable temperatures during July, crops were in mostly excellent condition at the end of July. Corn, however, was backward due to a late start. Pastures were very good. Some hailstorms and windstorms occurred during the month with windstorm damage on the 12th, 26th and 27th. A tornado struck three miles south of Hoople, Walsh County, on the 3rd at 6:30 p.m. and it ended in the vicinity of Alvarado, Minnesota, about 8 p.m. Eight people were killed in North Dakota and many others were injured. Most serious damage was done at Warsaw, Walsh County, where three houses in the south end of town were destroyed. The Knause bridge over the Forest River near Warsaw was demolished and pieces scattered along the river bank. Livestock losses were severe.—M.S.C.

TEMPERATURE

The mean temperature for the state was 70.4°, or 1.4° above the 1892-1947 average for July. The mean temperature for the eastern division was 70.2°; for the middle division, 70.3°; and for the western division, 70.6°. The highest mean temperature was 73.4° at Grenora, and the lowest, 66.8° at Edmore, making a range in mean temperature of 6.6°. The absolute range was 70°, from 103° at Bowman and Hettinger on the 28th, to 33° at Edmore on the 21st. The average daily deficiency in temperature for the state since January 1, 1947, is 0.1°.

PRECIPITATION

The average precipitation for the state was 1.79 inches, or 0.62 inch less than the 1892-1947 average for July. In the eastern division the average amount was 1.86 inches; in the middle division, 1.96 inches; and in the western division, 1.56 inches. The greatest monthly amount reported was 5.26 inches at Grafton; the least was 0.20 inch at Colgate. The greatest amount recorded in any 24 consecutive hours was 4.05 inches at Butte on the 8th. The accumulated deficiency in precipitation for the state since January 1, 1947, is 0.07 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				OF THE	
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.	Percentage of sunshine	Degree days
Bismarck.....	30.29	18	29.60	12	9.4	50	nw.	12	80	84	52	49	87	12
Devils Lake...	30.28	21	29.56	12	7.7	25	sw.	12	85	50	46	75	24	24
Fargo	30.27	21	29.56	12	11.8	33	nw.	29	79	83	51	48	74	20
Williston.....	30.27	18	29.56	11	6.4	26	w.	26	71	81	45	41	87	8

† And other dates.

COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	68.7	108	31	3.44	2.98	3.28	3.23	0	8	19	8	4	
1893...	69.5	112	35	2.54	1.94	1.64	2.04	0	7	17	10	4	
1894...	71.7	107	38	0.92	0.73	0.25	0.63	0	3	20	8	3	
1895...	66.1	102	29	3.12	2.44	3.13	2.90	0	8	14	11	6	
1896...	67.5	107	31	1.67	1.48	1.37	1.51	0	8	15	10	6	
1897...	68.9	109	38	6.46	4.43	2.40	4.43	0	9	13	11	7	
1898...	67.6	106	28	3.07	2.40	2.00	2.49	0	7	15	11	5	
1899...	68.3	109	32	2.37	2.30	2.35	2.34	0	6	18	9	4	
1900...	67.9	107	33	2.89	2.26	1.60	2.25	0	6	16	10	5	
1901...	70.8	110	40	5.10	4.08	3.66	4.28	0	6	18	7	6	
1902...	67.6	106	34	2.34	2.00	2.10	2.15	0	5	20	7	4	
1903...	66.7	109	26	2.59	1.77	2.32	2.23	0	7	17	8	6	
1904...	64.4	102	34	2.96	2.83	0.60	2.13	0	6	17	8	6	
1905...	65.6	100	32	4.27	3.90	3.17	3.78	0	8	17	9	5	
1906...	66.9	102	34	2.90	1.32	0.45	1.56	0	11	13	8	10	
1907...	65.8	103	31	2.69	3.90	2.60	3.06	0	9	16	11	4	
1908...	68.6	103	31	1.89	2.37	1.46	1.91	0	6	19	9	3	
1909...	67.1	99	34	3.45	2.94	1.80	2.73	0	8	15	9	7	
1910...	70.0	114	33	1.30	2.10	1.40	1.60	0	5	18	9	4	
1911...	65.1	107	23	2.25	1.76	1.10	1.70	0	6	18	10	3	
1912...	66.0	106	30	4.52	3.07	3.38	3.66	0	10	12	13	6	
1913...	65.6	103	35	2.64	2.38	1.65	2.22	0	8	17	8	6	
1914...	72.1	109	36	2.62	1.85	2.03	2.17	0	6	19	9	3	
1915...	62.3	97	30	2.42	2.66	4.30	3.13	0	11	12	11	8	
1916...	73.1	105	33	4.71	2.76	1.41	2.96	0	7	19	9	3	
1917...	70.9	114	27	1.96	1.80	0.87	1.54	0	7	17	11	3	
1918...	65.5	102	34	2.84	2.90	2.46	2.73	0	7	14	10	7	
1919...	71.2	105	37	3.15	1.11	1.32	1.86	0	5	18	10	3	
1920...	68.3	103	31	2.27	2.33	1.73	2.11	0	7	18	11	2	
1921...	71.4	110	35	4.47	2.87	1.88	3.07	0	7	17	10	4	
1922...	65.6	100	30	2.28	2.44	2.72	2.48	0	8	16	11	4	
1923...	71.2	103	35	2.90	3.34	2.91	3.05	0	8	16	11	4	
1924...	65.5	99	32	1.93	2.04	1.83	1.93	0	6	18	9	4	
1925...	66.7	106	29	1.43	1.33	1.30	1.35	0	6	18	9	4	
1926...	70.3	108	32	2.35	1.78	1.99	2.04	0	7	18	8	5	
1927...	65.4	97	28	2.33	3.11	3.09	2.84	0	9	15	10	6	
1928...	67.4	96	38	4.65	5.32	4.49	4.82	0	10	16	10	5	
1929...	70.6	109	34	1.93	1.09	0.78	1.27	0	5	21	8	2	
1930...	72.3	107	34	1.83	0.80	0.49	1.04	0	5	21	8	2	
1931...	70.6	111	37	2.89	3.20	3.01	3.03	0	8	17	8	6	
1932...	70.0	108	36	1.95	2.22	1.68	1.95	0	7	19	8	4	
1933...	71.9	109	36	2.04	2.13	1.83	2.00	0	7	19	9	3	
1934...	71.8	112	29	1.58	1.30	0.77	1.18	0	6	18	10	3	
1935...	73.8	110	45	3.90	5.44	3.90	4.41	0	10	17	11	3	
1936...	79.9	121	38	0.71	0.48	0.92	0.70	0	4	22	8	1	
1937...	71.7	111	40	3.70	2.70	2.40	2.93	0	9	15	10	6	
1938...	69.7	104	39	3.11	3.85	3.05	3.34	0	9	15	13	3	
1939...	72.6	108	37	1.57	1.82	2.04	1.81	0	7	19	9	3	
1940...	71.6	107	37	4.29	3.75	3.05	3.70	0	11	14	13	4	
1941...	70.8	106	34	1.40	1.65	2.23	1.76	0	8	15	12	4	
1942...	67.1	97	36	2.71	2.86	1.73	2.43	0	7	13	13	5	
1943...	70.5	103	41	2.68	3.14	2.13	2.72	0	8	19	9	3	
1944...	67.6	102	33	3.41	1.08	0.74	1.74	0	6	16	13	2	
1945...	67.8	102	30	2.58	2.50	1.85	2.31	0	9	16	12	3	
1946...	70.6	110	34	1.64	2.23	2.65	2.17	0	7	16	12	3	
1947...	70.4	103	33	1.86	1.96	1.56	1.79	0	6	20	9	2	
Period	69.0	121	23	2.74	2.45	2.05	2.41	0	7	17	10	4	

NAT
HIST

Climatological Data for July 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 14 mi. N.	Grand Forks	960	4	71.0	.....	96	28	36	22	2.58	.....	0.70	25	0	8	25	4	2	nw.	Albert Thoren.
Carrington	Foster	1,579	50	70.6	+1.2	95	31	42	21	2.23	-0.38	0.72	9	0	9	16	9	6	.....	Soo Line Agent.
Casselton	Cass	934	52	72.2	+2.3	96	29	38	21	1.00	-1.69	0.41	10	0	8	19	9	3	se.	Ashton Lockhart
Cavalier	Pembina	894	40	67.0	-2.0	95	28	39	21	3.04	+0.40	1.31	24	0	8	13	15	3	se.	City Light & Power Co.
Colgate	Steele	1,180	14	.....	.....	.....	.....	.....	.....	0.20	-2.33	0.20	12	0	1	17	12	2	sw.	O. M. Jensen.
Cooperstown	Griggs	1,423	51	68.2	-1.4	91	29	37	21	1.84	-0.75	0.81	17	0	6	19	8	4	sw.	R. J. Lockner
Courtenay	Stutsman	1,523	17	.....	.....	.....	.....	.....	.....	0.75	-1.87	0.26	12	0	5	24	7	0	w.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	71.4	+4.0	97	28	42	21	1.70	-0.87	1.19	24	0	6	15	14	2	s.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,563	47	70.4	+0.5	95	28	40	21	1.66	-0.91	0.51	9	0	8	22	6	3	se.	N. Dak. Agri. Exp. Sta.
Edmore, 14 miles W.	Ramsey	1,524	24	66.8	-0.7	93	15	33	21	1.48	-1.36	1.12	25	0	4	26	5	0	s.	Mike Davis.
Ellendale	Dickey	1,457	49	69.2	-1.7	94	28	40	22	2.78	+0.13	1.18	12	0	6	24	3	4	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	71.5	+3.4	97	29	41	21	0.80	-2.63	0.61	3-4	0	6	14	13	4	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	56	72.0	+1.9	96	28	40	21	1.23	-1.65	0.46	4	0	5	28	1	2	sw.	Art Waterman.
Fullerton	Dickey	1,439	50	70.2	0.0	95	28	40	21	3.18	+0.30	1.28	16	0	5	23	7	1	s.	F. O. Ahn.
Gackle	Logan	1,951	17	70.4	+0.4	94	27	39	21	1.05	-1.63	0.46	8	0	3	24	5	2	s.	Tony Martin.
Grafton	Walsh	827	56	70.6	+1.8	93	28	40	21	5.26	+2.50	2.53	10	0	6	12	15	4	s.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	70.8	+2.3	93	28	41	21	2.13	-0.65	1.06	24-25	0	8	11	16	4	se.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	7	70.0	.....	93	28	39	21	2.14	-1.02	1.02	24-25	0	9	11	11	9	s.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	72.2	+0.8	98	29	42	21	1.40	-1.47	0.50	1	0	6	17	8	6	w.	Soo Line Agent.
Hannah	Cavalier	1,563	54	68.6	+2.4	92	28	38	21	1.65	-0.78	1.60	24	0	2	11	19	1	sw.	A. E. Prior.
Hillsboro	Trails	901	42	71.8	+1.1	97	29	42	21	1.78	-0.86	0.80	3	0	5	15	13	3	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	71.6	+2.0	96	25	41	21	2.52	-0.18	1.96	8	0	6	15	14	2	s.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	7	69.2	.....	94	25	38	21	1.94	-1.50	0.8	8	0	5	15	12	4	s.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	69.5	.....	93	25	37	21	1.06	-0.40	0.26	0	0	8	12	15	4	s.	U. S. Wildlife Refuge.
LaMoure	LaMoure	.....	1	.....	.....	.....	.....	.....	.....	2.08	.....	1.30	8	0	6	10	14	7	.....	Andrew Remick.
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	69.0	+2.7	93	28	35	21	1.33	-1.17	0.66	24	0	5	18	11	2	sw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	55	70.0	+1.9	93	28	41	21	2.16	-0.78	0.76	25	0	6	14	15	2	sw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	69.9	-0.5	95	28	42	21	1.24	-1.66	0.34	4	0	8	20	6	5	sw.	J. O. Halverson.
Mayville	Trails	975	52	71.8	+1.6	94	28	41	21	2.56	-0.15	0.51	26	0	9	16	13	2	s.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	25	69.2	+1.1	95	28	37	21	0.98	-1.82	0.56	26	0	4	18	11	2	nw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	36	.....	.....	94	28	37	21	1.28	.....	1.24	24	0	4	16	11	5	s.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	.....	68.2	.....	94	28	37	21	1.28	.....	1.24	24	0	4	16	11	5	s.	Harold Feldner
Oakes	Dickey	1,318	19	72.1	+0.4	97	28	42	21	1.43	-1.42	0.59	12	0	6	25	4	2	sw.	C. M. Hagen.
Park River	Walsh	998	44	70.5	+2.0	95	28	40	21	3.82	+1.21	2.65	24	0	4	20	7	4	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	68.5	+0.7	92	28	39	21	2.57	+0.16	0.96	24	0	6	9	14	8	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	69.0	.....	94	28	37	21	0.99	-1.97	0.51	25	0	5	17	11	3	s.	T. C. Overland.
Sharon	Steele	1,516	24	69.8	-1.0	93	28	40	21	2.00	-0.69	0.76	26	0	7	17	11	3	sw.	Hugh Lyon.
Valley City	Barnes	1,229	43	70.8	+0.7	95	28	39	21	0.68	-2.04	0.21	12	0	6	21	9	1	sw.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	72.0	+1.1	98	29	39	21	2.56	-0.39	1.41	4	0	8	24	4	3	se.	State School of Science.
Average for Eastern Division				70.2	+0.8	98	29	38	21	1.86	-0.88	2.65	24	0	6	18	10	8	s.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	69.2	-0.5	96	28	39	21	4.98	+2.32	2.86	12	0	6	15	12	4	se.	Eddie H. Glur.
Belcourt	Rolette	1,960	3	67.3	.....	94	28	37	21	0.83	.....	0.48	26	0	5	16	13	2	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	70.7	+3.3	97	28	37	21	1.21	-1.49	0.82	24	0	4	21	7	3	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	72.2	+1.7	95	25	44	21	2.11	-0.17	1.04	16	0	7	18	10	3	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE.	Burleigh	1,650	8	72.6	+3.2	100	28	42	21	1.68	-0.56	0.71	16	0	4	18	10	3	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	70.0	+2.4	96	29	37	21	1.66	-0.73	0.60	9	0	7	19	11	1	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	68.2	-1.8	97	28	40	21	5.05	+2.32	4.05	8	0	6	20	7	4	s.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	36	72.0	+1.2	102	28	46	1	1.23	-0.76	0.79	12	0	7	20	11	0	nw.	J. W. Evans.
Center	Oliver	2,100	10	69.2	.....	98	28	35	21	1.34	.....	0.71	11	0	3	19	11	1	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	70.5	-1.1	98	25	42	21	2.17	-0.13	0.82	8	0	8	25	6	0	s.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	52	70.0	+3.0	94	28	37	20	2.21	-0.46	0.84	17	0	5	6	24	1	n.	State Tuberculosis San.
Eckman	Bottineau	1,500	42	69.5	+1.5	98	28	36	21	1.14	-1.22	0.57	8	0	8	19	10	2	nw.	E. R. Sherman.
Fessenden	Wells	1,610	36	70.8	+1.4	95	25	42	21	3.60	+1.03	2.24	8	0	4	25	5	1	s.	John V. Zuber.
Fort Yates	Sioux	1,670	48	72.6	-0.1	102	28	38	21	0.62	-1.46	0.25	12	0	5	27	2	2	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	27	70.7	+1.0	100	28	41	1	0.53	-1.40	0.20	8	0	5	17	10	4	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	70.5	+1.3	96	28	42	21	2.15	-0.34	0.76	8	0	5	18	10	3	s.	Mae H. Vorachek.
Granville	McHenry	1,504	41	70.2	+1.5	96	28	38	21	0.91	-1.36	0.40	8	0	7	25	6	0	nw.	Fred Roble.
Hansboro	Towner	1,597	40	68.9	+2.6	98	28	37	21	0.42	-2.12	0.21	16	0	4	14	15	2	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	.....	.....	.....	.....	2.65	+0.25	1.33	8	0	8	21	8	2	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	70.9	.....	99	28	36	21	1.46	.....	0.47	25	0	8	20	10	1	s.	John Duhmaga.
Linton	Emmons	1,711	31	72.2	-0.5	99	28	41	21	3.86	+1.73	2.95	9	0	3	22	7	2	se.	Wm. Heyerman.
Maddock, 1 mile E.	Benson	1,604	33	70.4	+1.5	95	28	39	21	2.02	-0.67	0.68	23	0	8	10</				

Climatological Data for July 1947-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Dunn Center	Dunn	2,191	49							1.33	-1.00	0.53	26	0	7					O. T. Evenson.
Elbowoods	McLean	2,082	55	70.3	+0.4	94	28	37	21	2.09	-0.32	1.15	15-16	0	3	25	5	1	w.	H. W. Case.
Epping	Williams	2,224	39	71.8	+1.0	98	28	44	18	1.26	-0.79	0.82	26	0	5	22	9	0	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	19							2.30	+0.02	0.71	10	0	7	23	6	2	se.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	30	69.8		97	28	45	21	0.95	-1.27	0.49	11	0	5	25	5	1	nw	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	7	70.1	+0.2	101	28	45	21	1.35	-0.45	0.52	12	0	7	17	12	2	se.	Chester K. Puda.
Grenora	Williams	2,114	39	73.4	+6.0	101	28	42	18	0.89	-0.95	0.54	28	0	4	26	3	2	se.	L. D. Nielson.
Halliday	Dunn	2,073	6							3.79		0.29	11	0	5	17	13	1	nw.	John Kisse.
Hettinger	Adams	2,675	41	70.4	-1.3	103	28	41	18	0.37	-1.91	0.12	25	0	6	26	5	0	sc.	Edgar Martin.
Kenmare	Ward	1,799	16	72.4	+3.1	96	28	47	21	1.12	-1.18	0.43	1	0	6	16	12	3	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	72.0	+0.8	100	28	45	11	1.39	-0.52	0.90	12	0	5	22	8	1	se.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	33	71.0		100	28	38	21	0.52	-1.37	0.25	10½	0	5	29	1	1	w.	Harry Roberts.
Mott	Hettinger	2,424	41	71.0	-0.6	99	28	46	11	0.80	-1.33	0.72	11½	0	4	21	8	2	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	71.5	+1.0	98	28	44	21	3.27	+1.14	1.53	10	0	12	19	12	0	se.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn		6	68.6		91	28	44	21	1.55		0.49	10½	0	9	20	10	1	w.	Peter F. Fick.
Parshall	Mountrail	1,929	33	69.8	+0.2	95	28	37	21	1.29	-0.93	0.46	12½	0	4	16	15	0	se.	C. E. Shubert.
Portal	Burke	1,954	34	70.9	+2.9	96	28	42	21	0.21	-1.86	0.10	8	0	3	20	9	2	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	43																	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	32	71.2	+0.1	95	28	45	21	1.32	-1.14	0.74	26	0	4	23	5	3	nw.	Assumption Abbey.
Ryder	Ward	2,108	19							0.84	-1.39	0.31	12	0	3	22	8	1	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	69.6	-1.1	95	28	39	21	2.66	+0.64	1.40	16	0	5	29	2	0	w.	H. J. Bugge.
Stanley	Mountrail	2,253	10	69.4		93	25	40	20	1.80		0.72	25	0	4	16	14	1	s.	Leroy Edwards.
Tagus	Mountrail	2,179	19							1.06	-0.99	0.67	26	0	8	20	11	0	sw.	Geo. N. Pilgard.
Tioga	Williams	2,279	19							2.60	-0.03	0.69	16	0	6	29	2	0	sw.	L. A. Simon.
Trotters	Golden Valley		22							3.30	+1.54	1.85	10	0	7	18	13	0	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	69.7		94	28	40	21	3.49		1.73	16	0	4	28	3	0	s.	H. Glenn Shins.
Watford City	McKenzie	2,084	35	72.4	+1.3	99	28	43	21	1.63	-0.37	0.45	26	0	6	28	3	0	se.	J. C. Zeller.
Wildrose	Williams	2,258	18							1.14	-0.84	0.50	26	0	7	23	8	0	s.	Jonathan Winkler.
Williston	Williams	1,878	69	72.7	+3.8	100	28	48	18	0.95	-0.94	0.53	26	0	5	18	10	3	se.	U. S. Weather Bureau.
Average for Western Division				70.6	+0.5	103	28	37	21	1.56	-0.49	1.85	10	0	6	22	8	1	se.	
Average for the State				70.4	+1.4	103	28	33	21	1.70	-0.62	4.05	8	0	6	20	9	2	se.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for July 1947

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	78	85	93	76	76	83	81	85	87	87	89	82	85	90	88	88	72	71	79	68	71	79	83	85	90	90	89	96	88	82	82	83.2	
	Minimum	42	53	58	58	49	46	50	58	60	63	62	59	58	61	61	65	61	49	50	49	39	43	51	59	61	62	52	60	63	58	50	55.2	
Bismarck Airport	Maximum	80	86	95	75	79	87	88	90	92	89	90	82	92	90	92	78	72	78	83	72	75	85	88	93	95	84	91	100	89	79	87	85.7	
	Minimum	50	59	62	59	53	59	62	66	67	66	62	60	58	61	65	66	56	49	54	52	42	53	60	69	69	63	58	64	67	59	51	59.4	
Bottineau	Maximum	78	85	89	86	84	83	84	83	86	89	87	85	86	89	89	87	82	74	77	76	72	82	86	86	89	90	89	95	96	85	82	84.9	
	Minimum	43	56	61	51	45	53	53	57	63	62	64	54	55	72	63	67	53	42	50	43	37	49	59	64	61	54	53	63	65	53	42	55.1	
Carson	Maximum	80	87	90	77	80	85	86	91	94	90	91	80	90	94	92	89	73	73	86	72	77	90	90	92	97	85	93	102	92	80	90	86.7	
	Minimum	46	57	62	56	49	58	61	65	64	64	60	58	55	60	55	55	48	52	51	46	52	58	65	66	61	60	65	66	55	54	57.4		
Crosby	Maximum	80	83	80	68	83	84	88	93	90	87	90	82	89	94	96	83	67	81	80	73	80	85	87	94	95	88	95	100	87	76	88	85.5	
	Minimum	44	52	60	53	46	48	52	63	62	60	58	57	52	54	62	67	51	38	49	44	39	49	51	62	59	59	65	59	53	45	54.0		
Devils Lake	Maximum	76	86	95	72	79	86	86	82	86	88	89	82	90	91	92	94	71	70	80	69	75	84	88	91	92	81	87	97	92	77	83	84.4	
	Minimum	50	56	61	54	47	57	60	62	65	67	64	64	60	62	65	68	57	4	54	48	42	51	63	58	64	63	61	64	71	56	50	58.5	
Dickinson Airport	Maximum	79	86	85	72	79	81	85	88	89	84	86	79	88	91	90	75	70	76	83	70	76	83	85	90	93	80	87	96	86	76	86	83.0	
	Minimum	48	54	61	55	52	55	60	65	63	63	59	56	58	61	64	60	51	45	55	50	44	53	54	58	64	58	58	66	59	56	53	56.7	
Dunn Center	Maximum	77	84	86	72	79	83	86	85	86	82																							
	Minimum	47	54	58	56	48	52	60	64	63	64	58																						
Fargo Airport	Maximum	77	84	95	73	77	84	84	85	86	86	86	86	89	89	92	85	80	73	85	69	72	80	86	87	90	85	89	96	97	81	81	84.0	
	Minimum	52	53	64	61	55	55	64	61	69	68	67	63	63	65	62	68	60	52	51	47	41	50	61	64	64	63	55	60	64	57	50	59.0	
Fessenden	Maximum	79	84	94	88	80	88	85	80	86	86	86	85	82	87	90	87	78	76	79	71	74	82	86	89	95	82	90	95	91	85	85	84.7	
	Minimum	47	54	58	56	48	60	55	58	63	62	62	61	58	60	62	67	58	45	53	48	42	47	60	61	66	61	57	59	69	56	48	56.8	
Fullerton	Maximum	78	85	91	81	77	86	83	87	87	81	89	82	87	88	88	84	78	74	82	69	75	81	85	82	90	87	87	95	95	77	82	83.6	
	Minimum	47	51	56	57	52	55	57	54	64	63	63	62	61	62	62	63	51	52	50	40	46	60	62	60	61	55	59	67	58	47	56.8		
Garrison	Maximum	81	86	90	75	81	87	86	84	88	85	89	81	90	91	92	79	69	78	84	72	77	84	88	91	93	84	92	96	87	80	86	84.7	
	Minimum	47	55	60	55	49	54	60	62	63	62	62	61	56	57	62	65	51	47	52	49	42	51	57	63	65	62	57	55	62	56	47	56.3	
Golva	Maximum	80	89	86	80	82	82	87	91	90	86	87	79	90	93	92	86	79	76	83	73	78	84	86	92	89	82	88	101	90	78	87	85.4	
	Minimum	47	49	50	52	50	55	58	62	59	58	51	55	67	55	60	66	58	55	56	50	45	51	54	51	58	55	56	61	56	52	48	54.8	
Grafton	Maximum	77	84	89	85	78	82	86	81	85	84	82	85	85	90	89	88	80	75	78	71	75	86	85	86	86	85	86	93	90	87	79	83.7	
	Minimum	43	53	59	59	52	58	61	57	65	62	66	66	66	64	61	62	61	49	55	46	40	53	54	56	59	56	65	65	69	58	47	57.6	
Grand Forks Airport	Maximum	78	84	89	74	77	85	85	84	85	80	86	87	88	92	87	88	72	78	74	79	66	73	81	85	87	88	80	86	93	92	77	78	82.8
	Minimum	50	55	59	58	51	55	62	57	67	64	67	63	63	64	63	66	55	50	52	44	39	46	57	62	62	64	50	60	64	53	48	57.1	
Jamestown Airport	Maximum	78	82	90	76	78	85	82	84	83	84	85	81	85	90	87	85	72	74	82	71	72	79	85	84	94	87	87	93	89	80	83	82.8	
	Minimum	49	52	53	53	48	56	53	54	64	64	62	63	60	58	61	65	60	49	54	44	38	47	60	62	60	53	56	63	54	45	55.5		
Kenmare	Maximum	83	87	90	73	83	84	87	87	87	89	89	85	91	91	92	88	67	82	81	74	78	84	88	91	95	86	93	96	87	75	86	85.5	
	Minimum	51	60	65	56	52	55	64	65	68	65	66	61	62	60	66	68	55	48	49	47	57	62	64	62	60	65	64	57	52	59	4	59.4	
Langdon	Maximum	77	84	89	83	79	82	84	80	86	83	83	81	89	88	89	87	82	74	78	73	75	82	85	88	87	82	87	93	90	80	81	83.3	
	Minimum	44	52	60	54	45	54	58	58	62	63	63	62	58	58	61	63	57	42	47	38	35	46	56	58	59	58	55	60	68	56	43	54.6	
Marmarth	Maximum	82	88	80	81	83	88	89	90	89	86	81	89	92	92	85	78	76	86	77	87	87	87	87	87	87	87	87	90	100	90	82	93	86.2
	Minimum	45	50	62	59	52	58	62	65	65	65	55	55	53	58	10	53	47	55	53	45	53	53	60	64	67	56	68	66	66	58	57.8		
Minot Airport	Maximum	79	86	92	72	80	84	86	83	87	87	86	82	89	89	90	83	67	77	79	72	76	82	88	90	92	83	90	96	86	75	85	83.6	
	Minimum	48	60	62	56	4	56	58	62	62	62	64	61	59	59	63	65	51	44	56	49	45	55	39	63	64	62	60	61	63	57	51	57.6	
Mott	Maximum	80	88	86	80	81	83	86	90	89	85	89	85	89	93	93	86	75	77	86	75	78	87	89	92	95	92	92	99	97	90	90	87.0	
	Minimum	46	54	63	56	46	49	60	64	64	61	56	55	53	56	63	68	55	47	50	50	48	52	53	60	64	58	51	52	52	50	46	54.9	
Pembina Airport	Maximum	77	84	85	72	77	82	85	83	86	80	82	85	83	87	89	88	74	74	75	65	74	80	86	85	84	78	88	92	87	70	78	81.1	
	Minimum	48	50	61	54	49	55	60	58	68	65	64	65	63	63	61	61	55	46	48	44	39	46	59	59	63	60	56	60	61	49	44	55.9	
Sharon	Maximum	77	81	90	84	78	85	82	83	82	80	86	82	90	89	89	79	80	75	83	75	75	83	85	85	85	85	85	90	82	85	92	80	84
	Minimum	47	53	60	56	48	56	61	55	63	64	66	61	58	61	64	64	60	48	62	47	40	45	56	58	58	59	54	57	68	54	45	83.1	
Steele	Maximum	77	83	91	82	77	83	90	89	88	88	86	79	85	86	87	83	75	73	80	69	70	80	85	86	90	85	84	94	88	80	81	83.8	
	Minimum	44	52	57	50	51	59	57	53	55	55	55	59	58	57	58	63	59	45	52	48	39	41	57	63	63	60	52	50	66	53	47	54.6	
Valley City	Maximum	76	83	91	83	76	85	85	87	84	85	85	87	86	89	89	86	84	72	83	70	71	80	83	85	90	86	85	95	93	81	80	83.8	
	Minimum	51	52	61	61	51	52	61	59	65	66	63	62	60	61	62	63	64	50	50	52	39	45	59	63	60	66	52	60	72	59	48	57.7	
Wahpeton	Maximum	70	83	92	91	77	81	83	84	84	82	85	86	88	88	90	90	84	74	85	81	71	80	85	85	88	88	95	95	9				

Daily Precipitation for July 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James	.02									.72	.16	.10	.24				.01	.05	T.					.58	T.		.35					2.23	
Casselton	Red.			.01					.19	.01	.12	.29	.22	T.				.06	T.						.10		.07	.09	.01				1.00	
Cooperstown	Sheyenne								.10				.51					.81									.25						1.84	
Courtenay	James					.10					.08	.26															.16	.15					0.75	
Devils Lake ^{1 5}	Devils Lake			T.					.02	T.	.01	.31					.11								1.19		.06						1.70	
Edgeley	James	.07		.09					.02	.51		.03	.50				.05										.39						1.66	
Edmore	Devils Lake			T.								.06					.15										1.12	.15					1.48	
Ellendale	James			.41						.05		1.18					1.06	.06									.02						2.78	
Fargo ^{1 5}	Red.		.48	.13		.02	T.	T.				.13					.02	T.									.02						0.80	
Forman	Sheyenne			.46					.19	T.							.12	.25										.13					1.23	
Fullerton	James			.50								1.13					1.26	.10															3.18	
Gackle	do								.46				.40				.19																1.05	
Grafton	Red.	T.		.14							2.53	T.	.21					.18	T.									2.14	.06				5.26	
Grand Forks Airport ³	do		.09								.37	.07	.27				.17	.04								.99	.03	.11					2.14	
Hankinson ²	do	.50		.08	.28			T.				.12	.20	T.				.22	T.														1.40	
Hannah	Pembina										.05															1.60							1.65	
Hillsboro	Red.		.80								T.		.36												.02		.51	.09					1.78	
Jamestown Airport ³	James			T.				1.50	T.		.20	.05					.09										.10						1.94	
Langdon	Pembina										.57							.09									.11	.55	.01					1.33
Larimore	Red.			.11							.48	.20					.34											.76	.27				2.16	
Lisbon	Sheyenne	.28		.34	.31				.03		.06	.16					.05	.05									.01						1.24	
Mayville	Red.	.16		.33		.03					.42	.49					.04								.09	T.	.49	.51					2.56	
McHenry	James							.10				.28					.04											.56					0.98	
McLeod	Sheyenne			.01	.23							.04	.59				.49																1.43	
Oakes ²	James	.07									.58						.47											2.63	.12				3.82	
Park River	Red.		.15								.70	.33								.07	T.												2.57	
Pembina Airport ³	do					.06					.07		.12																				0.99	
Petersburg	do								.10		.02	T.	.45				.08								.55		.51	.23		.76			2.00	
Sharon	do			T.							.02	T.	.21				.18																0.68	
Valley City	Sheyenne	.15							.02	T.		.02	.18				.06																2.56	
Wahpeton	Red.	.24		1.41	.03			.32			.28	.18																						
Middle Division																																		
Ashley ³	Missouri				.06					.51		.60	2.86					.83				.12							T.	T.			4.98	
Bisbee	Devils Lake								.11		.25	T.	.45				.71								.03	.82		.46	T.				1.21	
Bismarck Airport ^{1 5}	Missouri			T.																						.06	T.		.46	T.				1.68
Bottineau ²	Mouse	.04							.57		.60	.03					.07	.34				.02						.08					1.66	
Butte	do	.06		.12				4.05				.45					.07											.30					5.05	
Carson	Heart	.09									.07	.79					.08				.07						.05		.08				1.23	
Center	Missouri											.71					.13											.50					1.34	
Drake ²	Mouse	.37				.05					.82		.14				.09					.10						.55					2.17	
Dunseith	do	.02			.67				.51									.84										.17					2.21	
Eckman	do	.16							.42	.15	.06	.03					.21				.02								.09				1.14	
Fessenden	James							2.24		.53		.19																.64					3.60	
Fort Yates	Missouri	.11		.13								.25						.03		.10													0.62	
Foxholm	Mouse				.03	.02			.20									.10										.18					0.53	
Garrison ³	Missouri								.76			.15	.33				.49											.42					2.15	
Granville	Mouse	.05		.01	T.				.40		.09	.21															.04	.11					0.91	
Hansboro	Devils Lake								.03									.21									.17	.01					0.42	
Linton	Missouri								2.95		.80						.11												T.	T.			3.86	
Maddock	Sheyenne	.06					T.		.26		.42	.14																.41					2.02	
Mandan ²	Missouri	.07										.59					2.03	.19					.02		.68		.06	.33	T.				3.28	
Max ²	do								.51	.02	.31						.22											.44					1.69	
McClusky	do	.04							.12	.15		.12					.09											.02	.50				1.05	
Minot Airport ³	Mouse			.03	T.				.20				.18				.03										.10	.75					1.29	
Mohall	do				T.								.01				1.32	.08									.01	.14					1.56	
Napoleon	Missouri	.01								1.23	T.						.58	.07		.06									.47				3.01	
New Salem	Heart										.95						.32																4.27	
Pettibone	James							1.34		.09	.26						.44	.07										.23					2.43	
Rolla	Devils Lake	T.		T.		.02			.06								T.	1.69										.49					2.26	
Rugby	Mouse	.08							.30																									

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVI BISMARCK, N. D., AUGUST 1947 No. 8

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
REMITTANCE PAYABLE TO SUPERINTENDENT OF DOCUMENTS, WASHINGTON, D. C.

GENERAL SUMMARY

This was the second warmest August since climatological records began. The mean temperature of 70.9° was exceeded only in 1937. Bismarck had six days with readings above 100°; there has never been more than two days above 100° in any other August since 1875. Normally there is an average of 5 days above 90° in North Dakota; this August there were 11 days above 90°. Precipitation occurred mostly during the first half of the month, but it was erratic, with heavy amounts over the north portion and light amounts over the extreme southeast, where normally the heavier amounts occur. Williston's rainfall was the greatest on record for August. Only scattered small areas of hail were reported, mostly on the 15th, 26th and 31st. Thunderstorms occurred on the 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 21, 22, 23, 25, 26, 27, 28, 30, 31. Sunshine and cloudiness averaged near the normal. Excellent harvesting and combining weather prevailed except in the north portion where some delays were caused by heavy rain. Small grain harvest was nearing completion, with 75% of spring wheat threshed with yield and quality excellent; in some areas the best of any year. Flax is an excellent crop this year with harvest just beginning. Corn and pastures deteriorated with the extreme heat hastening maturity. Livestock are excellent with feed ample.—M.S.C.

TEMPERATURE

The mean temperature for the state was 70.9°, or 4.3° above the 1892-1947 average for August. The mean temperature for the eastern division was 71.9°; for the middle division, 70.7°; and for the western division, 70.2°. The highest mean temperature was 77.2° at Wahpeton, and the lowest, 65.8° at Bowbells, making a range in mean temperature of 11.4°. The absolute range was 76°, from 110° at Fort Yates on the 3d, to 34° at Center on the 25th. The average daily excess in temperature for the state since January 1, 1947, is 0.4°.

PRECIPITATION

The average precipitation for the state was 2.67 inches, or 0.58 inch more than the 1892-1947 average for August. In the eastern division the average amount was 2.37 inches; in the middle division, 2.62 inches; and in the western division, 3.02 inches. The greatest monthly amount reported was 6.64 inches at Hannah; the least was 0.21 inch at Forman. The greatest amount recorded in any 24 consecutive hours was 2.90 inches at Hannah on the 16th. The accumulated excess in precipitation for the state since January 1, 1947, is 0.51 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.35	25	29.47	9	11.0	34	nv	5	74	86	48	44	81	26
Devils Lake....	30.34	25	29.54	4	8.1	26	n	5	76	84	52	45	60	32
Fargo.....	30.31	25	29.49	5	12.9	34	e	7	76	82	50	47	75	19
Williston.....	30.34	24	29.52	9	7.0	41	w	5	74	85	53	46	79	28

† And other dates.

COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	67.3	105	24	2.86	2.80	1.50	2.39	0	8	15	10	6	
1893...	66.7	109	29	2.10	1.25	0.58	1.31	0	3	20	7	4	
1894...	68.8	102	30	1.37	0.86	1.20	1.14	0	4	17	10	4	
1895...	64.5	104	24	1.87	1.36	1.48	1.57	0	5	17	11	3	
1896...	64.7	107	21	2.07	0.86	0.42	1.12	0	5	17	10	4	
1897...	64.1	106	29	1.28	1.13	1.13	1.18	0	5	15	10	6	
1898...	65.4	104	24	2.92	1.40	0.75	1.69	0	5	15	11	5	
1899...	65.2	97	32	2.90	2.90	2.69	2.83	0	6	15	11	5	
1900...	70.4	114	33	6.05	4.53	4.60	5.06	0	10	14	11	6	
1901...	66.9	100	32	2.55	1.90	0.86	1.77	0	6	18	8	5	
1902...	64.3	96	26	2.65	2.36	1.88	2.30	0	8	16	9	6	
1903...	63.7	103	35	4.72	4.65	4.67	4.68	0	10	13	7	11	
1904...	63.3	102	31	1.56	1.92	1.34	1.61	0	6	17	7	7	
1905...	67.5	107	34	3.51	2.44	1.34	2.43	0	7	17	8	6	
1906...	66.3	105	31	1.53	1.74	2.25	1.84	0	7	17	8	6	
1907...	64.5	104	26	2.17	1.23	1.79	1.73	0	6	18	9	4	
1908...	63.2	104	25	2.48	2.46	1.55	2.16	0	7	17	8	6	
1909...	69.8	109	27	2.98	1.94	1.78	2.23	0	6	18	9	4	
1910...	63.1	109	24	1.58	1.30	1.51	1.46	0	5	14	8	9	
1911...	62.2	98	23	3.61	3.87	2.15	3.21	0	8	12	11	8	
1912...	63.4	118	32	3.41	2.60	2.62	2.88	0	10	11	10	10	
1913...	68.9	106	30	3.15	2.32	2.42	2.63	0	6	16	10	5	
1914...	64.2	101	26	2.00	2.26	2.61	2.29	0	7	13	11	7	
1915...	64.4	100	19	1.16	1.49	0.89	1.18	0	4	19	8	4	
1916...	66.0	100	26	3.17	2.79	2.05	2.67	0	8	16	10	5	
1917...	65.2	105	25	0.96	0.74	0.76	0.82	0	4	17	10	4	
1918...	66.5	102	34	3.51	3.39	3.25	3.38	0	8	15	11	5	
1919...	67.9	101	30	2.58	1.57	0.63	1.59	0	5	18	10	3	
1920...	68.8	108	28	1.03	2.01	1.55	1.53	0	5	22	6	3	
1921...	67.2	108	31	3.08	1.86	0.99	1.98	0	6	18	10	3	
1922...	69.8	115	33	1.29	1.63	1.02	1.31	0	6	18	9	4	
1923...	63.0	97	28	2.38	1.70	1.45	1.84	0	8	14	12	5	
1924...	63.8	102	28	2.27	1.36	1.09	1.57	0	6	17	9	5	
1925...	67.9	110	29	1.39	1.06	0.66	1.04	0	5	20	8	3	
1926...	65.6	105	36	3.01	2.41	1.68	2.37	0	7	14	8	9	
1927...	63.4	96	28	3.17	3.63	2.58	3.13	0	8	18	8	5	
1928...	64.8	105	25	3.84	3.15	2.28	3.09	0	8	17	9	5	
1929...	68.5	106	26	0.87	0.83	0.60	0.77	0	4	20	9	2	
1930...	70.4	104	32	1.40	1.45	1.49	1.45	0	6	15	9	7	
1931...	67.0	105	30	2.43	2.33	1.51	2.09	0	6	16	9	6	
1932...	68.3	100	28	2.40	1.37	1.89	1.89	0	7	16	10	5	
1933...	68.5	104	31	0.81	0.64	0.79	0.75	0	5	17	9	5	
1934...	67.4	108	25	1.70	1.15	0.60	1.15	0	5	16	11	4	
1935...	66.2	109	26	3.83	1.90	1.32	2.35	0	8	16	9	6	
1936...	69.8	110	29	1.67	1.37	1.16	1.40	0	6	14	11	6	
1937...	72.9	109	40	2.56	1.11	0.88	1.52	0	5	18	10	3	
1938...	69.8	109	33	1.79	1.22	1.48	1.50	0	6	18	10	3	
1939...	68.6	105	32	1.94	2.37	1.98	2.10	0	7	18	9	4	
1940...	67.8	103	33	3.12	1.77	1.25	2.05	0	7	18	7	6	
1941...	68.8	111	32	3.44	2.63	2.52	2.86	0	10	11	14	6	
1942...	66.3	105	33	4.69	2.48	2.10	3.09	0	9	12	12	7	
1943...	67.7	104	31	2.60	2.52	2.71	2.61	0	9	16	10	5	
1944...	65.6	102	34	7.06	3.64	2.42	4.37	0	11	13	11	7	
1945...	67.1	105	32	1.84	2.10	1.10	1.68	0	6	16	11	4	
1946...	65.2	104	29	1.93	1.70	1.23	1.62	0	7	16	10	5	
1947...	70.9	110	34	2.37	2.62	3.02	2.67	0	9	16	11	4	
Period	66.6	118	19	2.55	2.04	1.68	2.09	0	7	16	10	5	

NAT.
HIST.

Climatological Data for August 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	70.6		104	4	38	28	4.76		1.61	11	0	11	23	7	1	se.	Albert Thoren.
Carrington	Foster	1,579	50	70.8	+3.7	105	4	43	25	2.37	+0.30	1.64	11	0	10	12	9	10	.....	Soo Line Agent.
Casselman	Cass	934	52	75.4	+8.3	104	4	44	28	1.57	-0.97	0.50	16-17	0	7	16	12	3	se.	Ashton Lockhart
Cavalier	Pembina	894	40	67.1	+1.2	101	22	42	27	3.02	+0.51	0.57	10	0	13	6	15	10	se.	City Light & Power Co.
Colgate	Steele	1,180	14							2.78	+0.30	1.13	15	0	6	10	17	4	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	51	72.9	+5.5	108	3	41	28	2.61	0.00	1.35	11	0	7	16	9	6	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	17							1.73	-0.67	0.97	10-11	0	9	18	13	0	e.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	71.4	+6.6	103	4	43	27	2.66	+0.18	0.77	10	0	13	12	15	4	se.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	47	72.1	+4.4	105	4	39	25	0.66	-1.69	0.44	7	0	4	16	15	0	s.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	68.5	+3.7	101	4	41	30	2.48	+0.15	0.58	10-11	0	11	21	7	3	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	72.7	+4.0	104	22	43	25	0.44	-2.33	0.24	16	0	5	19	6	6	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	73.9	+7.8	105	4	46	28	2.49	-0.40	0.69	26-27	0	12	14	15	2	s.	U. S. Weather Bureau.
Forman	Sargent	1,249	56	76.6	+8.4	105	4	46	25	0.21	-2.54	0.21	27	0	1	24	6	1	sw.	Art Waterman.
Fullerton	Dickey	1,439	50	73.6	+5.6	103	21	41	25	0.47	-2.07	0.31	16	0	3	17	13	1	s.	F. O. Alin.
Gackle	Logan	1,951	17	73.0	+5.5	105	3	43	25	2.32	-0.03	2.16	10	0	3	23	7	1	s.	Tony Martin.
Grafton	Walsh	827	56	71.8	+5.6	98	22	40	28	3.26	+0.74	0.71	11	0	14	14	16	1	se.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	890	57	70.5	+4.5	102	4	45	25	3.15	+0.53	0.68	11	0	12	11	16	4	se.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	7	70.6		102	4	44	28	3.03		0.69	16	0	11	10	14	7	se.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	75.2	+4.5	105	4	46	28	0.68	-2.07	0.19	13	0	4	10	7	7	se.	Soo Line Agent.
Hannah	Cavalier	1,568	54	70.4	+6.3	95	4	39	27	6.64	+4.27	2.90	16	0	8	6	24	1	sw.	A. E. Prior.
Hillsboro	Trall	901	42	73.6	+5.4	106	4	45	28	3.02	+0.27	1.30	7-8	0	7	8	18	5	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	74.0	+7.1	107	4	44	28	1.76	-0.79	0.93	10	0	6	6	20	5	se.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	7	71.6		105	4	41	25	1.90		1.00	10-11	0	8	13	13	5	se.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	70.8		104	4	37	25	2.00		1.09	10-11	0	5	16	9	6	se.	U. S. Wildlife Refuge.
LaMoure	LaMoure		1							0.26		0.18	7	0	4	13	15	3	se.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	69.6	+5.9	100	22	35	27	2.60	+0.13	0.90	5	0	13	12	15	4	se.	V. Sturlingsen.
Larimore	Grand Forks	1,134	55	70.6	+4.7	102	4	44	28	3.56	+0.85	1.23	11	0	6	5	19	7	sw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	72.5	+4.7	104	4	46	28	0.71	-2.19	0.19	21	0	9	16	7	8	nw.	J. O. Halverson.
Mayville	Trall	975	52	72.4	+4.5	104	4	44	25	2.51	-0.04	0.59	11	0	9	12	17	2	se.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	25	70.6	+4.9	105	4	41	27	1.85	-0.47	1.20	10	0	6	20	9	2	se.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	36																	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	19	67.8		99	4	40	27	3.54		1.12	5	0	11	7	20	4	sw.	Harold Feldner
Oakes	Dickey	1,318	19	75.4	+6.3	106	9	44	28	0.93	-1.74	0.45	17	0	5	21	7	3	s.	C. M. Hagen.
Park River	Walsh	998	44	71.1	+4.5	102	22	41	28	2.99	+0.69	0.90	16	0	11	22	8	1	se.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	68.8	+4.1	96	22	39	28	2.99	+0.70	0.94	7-8	0	11	6	17	8	se.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	69.8		102	4	43	25	5.71	+3.35	2.11	7-8	0	11	12	14	5	w.	T. C. Overland.
Sharon	Steele	1,516	24	69.6	+1.7	103	4	41	25	2.91	+0.54	1.25	10-11	0	10	9	18	4	ne.	Hugh Lyon.
Valley City	Barnes	1,229	43	74.2	+6.5	103	4	43	25	1.26	-1.28	0.62	16	0	6	17	8	6	s.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	77.2	+8.5	104	4	45	25	0.73	-2.14	0.28	17	0	5	17	13	1	se.	State School of Science.
Average for Eastern Division				71.9	+4.9	108	3	36	27	8.37	-0.18	2.90	16	0	8	14	13	4	se.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	72.6	+5.4	108	4	43	25	1.15	-1.29	0.62	8	0	5	16	9	6	se.	Eddie H. Glur.
Belcourt	Rolette	1,960	3	66.4		97	3	35	25	4.14		1.54	9-10	0	11	15	13	3	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	70.2	+4.5	102	3	43	27	4.48	+2.13	1.89	16	0	10	20	9	2	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	73.4	+5.2	103	3	43	25	1.10	-0.53	0.42	28	0	9	15	13	3	se.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE.	Burleigh	1,650	8	72.8	+6.1	105	21	43	25	1.13	-0.69	0.39	28	0	8	15	13	3	se.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	69.4	+4.5	98	3	42	25	5.59	+3.14	2.12	9-10	0	11	12	16	3	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	69.0	+1.8	100	3	41	25	2.58	+0.64	1.02	4-5	0	9	18	9	4	s.	R. L. Williams.
Carson, 2 miles SW	Grant	2,500	36	72.4	+3.8	108	9	42	27	1.00	-0.66	0.44	5-6	0	6	19	12	0	se.	J. W. Evans.
Center	Oliver	2,100	10	69.6		104	21	34	25	2.28		0.68	7	0	7	16	14	1	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	69.8	+2.2	102	3	42	25	2.81	+0.79	1.02	5	0	10	19	12	0	se.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	52	68.6	+4.0	97	4	43	27	4.19	+1.83	2.24	10	0	11	9	18	4	e.	State Tuberculosis San.
Eckman	Bottineau	1,500	42	68.1	+3.1	99	4	39	25	4.72	+2.84	1.10	9	0	13	18	9	4	s.	E. R. Sherman.
Fessenden	Wells	1,610	36	72.1	+5.4	106	4	42	28	1.32	-0.86	0.44	11	0	7	16	13	2	s.	John V. Zuber.
Fort Yates	Sioux	1,670	48	74.8	+5.1	110	3	41	25	1.78	-0.11	1.50	11	0	2	25	5	1	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	27	70.4	+3.8	100	3	40	25	3.27	+1.29	0.59	5	0	11	11	9	11	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	70.2	+3.6	103	3	40	25	2.78	+0.84	0.76	5	0	8	14	10	7	se.	Mae H. Vorachek.
Granville	McHenry	1,504	41	70.2	+4.5	102	4	40	25	2.93	+1.06	1.12	10-11	0	12	24	4	3	se.	Fred Roble.
Hansboro	Towner	1,597	40	67.8	+4.3	102	3	38	27	5.37	+3.05	1.71	9-10	0	11	13	9	9	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45							1.55	-0.64	0.38	10-11	0	9	15	13	3	se.	H. J. Reynolds.
Leeds	Benson	1,515	7	71.2		104	4	40	27	2.57		0.60	5	0	22	17	8	6	se.	John Dulmage.
Linton	Emmons	1,711	31	75.2	+5.1	106	3	44	25	2.25	+0.17	1.58	10-11	0	8	18	6	7	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	33																	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	34	71.4	+2.5	104	21	43</												

Climatological Data for August 1947—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Dunn Center	Dunn	2,191	49	69.4	+3.0	100	3	40	25	3.04	+1.38	1.26	11	0	8	16	12	3	se.	O. T. Evenson.
Elbowoods	McLean	2,082	55	69.2	+1.3	100	3	36	25	2.73	+0.89	0.64	9-10	0	8	21	9	1	nw.	H. W. Case.
Epping	Williams	2,224	39	70.2	+2.7	102	3	43	25	2.86	+1.22	0.89	13	0	8	17	10	4	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	19							3.65	+2.07	0.91	12	0	7	22	7	2	nw.	Mrs. Edith Larson.
Fryburg, 2 miles N.	Billings	2,790	30	70.6		101	21	44	25	2.79	+0.98	0.94	6	0	8	21	7	3	sw.	Verne King.
Golva, 1 mile E.	Golden Valley	2,781	7	70.1	+2.9	100	3	36	25	1.90	+0.30	1.08	10	0	3	18	11	2	se.	Chester K. Puda.
Grenora	Williams	2,114	39	71.2	+5.6	103	3	42	25	3.64	+2.14	1.57	10-11	0	10	16	13	2	se.	L. D. Nielson.
Halliday	Dunn	2,073	6							3.21		0.88	10	0	8	18	12	1	se.	John Kisse.
Hettinger	Adams	2,675	41	70.8	+1.9	103	9	39	15	1.78	+0.24	0.78	13	0	7	27	4	0	se.	Edgar Martin.
Kenmare	Ward	1,799	16	69.4	+3.4	102	4	40	27	3.72	+1.81	0.95	15	0	13	11	12	8	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	71.4	+3.2	98	3	48	14†	3.38	+1.76	1.25	10-11	0	8	22	7	2	se.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	33			102	3			2.84	+1.32	0.99	4-5	0	4	27	3	1	w.	Harry Roberts.
Mott	Hettinger	2,424	41	73.2	+5.2	105	9	40	25	1.04	-0.72	0.45	9-10	0	5	23	7	1	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	71.0	+3.2	104	9	40	14†	1.92	+0.34	0.70	10-11	0	9	16	13	2	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn		6	69.5		96	21	43	25	4.91		2.07	5-6	0	6	18	10	3	nw.	Peter F. Picek.
Parshall	Mountrail	1,929	33	69.7	+3.7	104	3	37	25	3.55	+1.71	1.60	10-11	0	10	11	19	1	sw.	C. E. Shubert.
Portal	Burke	1,954	34	67.1	+2.3	99	3	38	27	4.50	+2.54	1.48	12-13	0	12	14	11	6	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	43																	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	32	72.2	+3.7	102	3	45	27	1.59	-0.25	0.51	10-11	0	8	17	12	2	nw.	Assumption Abbey.
Ryder	Ward	2,108	19							3.81	+1.74	1.73	10-11	0	9	22	3	6	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	68.0	+0.4	101	3	37	25	2.56	+0.96	0.70	10	0	13	20	7	4	e.	H. J. Bugge.
Stanley	Mountrail	2,253	10	67.7		101	3	38	25	3.68		0.65	22	0	14	16	9	6	se.	Leroy Edwards.
Tagus	Mountrail	2,179	19							3.44	+1.66	0.85	10-11	0	14	12	16	3	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	19							3.40	+1.65	0.75	13	0	8	21	9	1	se.	L. A. Simon.
Trotters	Golden Valley		22							2.83	+1.29	1.19	4-5	0	7	10	20	1	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	69.4		101	3	38	25	3.45		1.10	10	0	8	18	11	2	s.	H. Glenn Sims.
Watford City	McKenzie	2,084	35	71.2	+2.9	103	3	42	25	3.13	+1.53	1.06	12-13	0	13	16	14	1	se.	J. C. Zeller.
Wildrose	Williams	2,258	18							3.54	+1.73	1.33	10-11	0	8	20	8	3	nw.	Jonathan Winkjer.
Williston	Williams	1,878	69	70.4	+4.3	99	3	46	25	5.06	+3.59	1.53	12-13	0	13	13	15	3	se.	U. S. Weather Bureau.
Average for Western Division				70.2	+3.1	104	8†	36	25	3.02	+1.34	2.07	5-6	0	9	19	9	3	se.	
Average for the State				70.9	+4.3	110	3	34	25	2.67	+0.58	2.90	16	0	9	16	11	4	se.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 46-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
‡ And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for August 1947																																		
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum... 96	98	104	108	85	87	83	98	98	97	72	76	73	82	93	98	80	86	93	91	104	104	91	76	77	95	71	75	86	84	88	88.7		
	Minimum... 60	64	65	71	67	53	55	60	63	64	67	48	49	45	48	59	60	53	56	57	62	70	70	55	43	47	51	47	45	46	47	56.4		
Bismarck Airport	Maximum... 96	100	104	104	84	83	76	96	104	82	68	80	74	83	89	93	83	89	94	92	105	101	88	73	78	89	71	66	86	82	83	87.0		
	Minimum... 66	63	64	69	64	61	59	67	63	65	56	49	55	48	58	67	56	52	58	62	68	76	63	53	43	59	51	44	56	48	54	58.6		
Bottineau	Maximum... 93	92	98	97	97	80	75	89	90	83	72	76	75	78	81	85	85	84	90	90	93	96	96	78	68	76	66	66	76	76	76	83.1		
	Minimum... 61	58	64	66	59	59	52	58	65	60	53	51	57	43	54	60	55	54	59	61	67	73	63	52	42	52	43	47	49	42	51	55.8		
Carson	Maximum... 97	103	103	105	86	87	80	100	108	87	71	80	75	84	92	83	83	90	90	94	105	102	88	75	80	90	75	64	90	80	86	85.2		
	Minimum... 61	63	66	50	63	58	60	65	67	55	55	50	55	47	56	55	57	55	50	64	62	74	54	50	43	59	42	48	54	58	55	56.5		
Crosby/	Maximum... 95	99	102	98	86	76	71	88	89	73	75	96	72	81	80	77	76	86	83	85	89	88	75	63	73	67	61	70	78	78	75	80.8		
	Minimum... 54	62	60	64	57	55	50	53	57	60	54	50	43	48	52	56	54	53	59	55	59	63	63	49	40	44	39	44	49	44	48	52.8		
Devils Lake	Maximum... 94	96	99	103	80	82	69	90	96	80	69	77	72	82	86	88	78	87	92	86	103	101	87	70	73	83	47	53	52	79	81	83.9		
	Minimum... 63	60	66	72	62	60	55	62	63	63	57	54	50	45	56	60	64	58	56	59	65	70	78	64	52	47	54	43	47	53	52	58.8		
Dickinson Airport	Maximum... 93	95	99	98	81	80	76	94	100	75	67	76	71	79	84	85	76	87	93	93	100	97	81	67	80	83	74	69	82	81	80	83.7		
	Minimum... 62	62	66	64	60	58	60	61	66	60	53	52	52	47	53	59	57	56	61	63	64	66	57	49	43	50	45	52	57	51	52	56.7		
Dunn Center/	Maximum... 93	96	100	98	88	80	78	90	98	94	70	75	71	79	82	82	76	86	93	89	97	96	83	66	79	80	63	69	80	78	80	83.5		
	Minimum... 56	58	64	63	60	57	57	56	62	66	54	50	56	46	51	53	55	54	59	59	63	65	62	60	40	50	45	46	53	45	51	55.4		
Fargo Airport	Maximum... 90	93	96	105	83	88	80	97	95	96	85	79	76	81	91	91	78	83	90	90	103	101	92	79	76	87	65	69	88	77	75	86.4		
	Minimum... 64	65	71	75	63	54	58	68	70	75	61	54	61	53	62	64	63	61	58	64	72	78	69	55	47	55	49	46	57	54	58	61.4		
Fessenden	Maximum... 95	94	102	106	100	83	78	97	98	91	70	76	70	83	90	89	85	83	93	91	103	101	96	83	82	87	66	67	82	82	82	87.4		
	Minimum... 64	60	63	70	62	57	55	57	63	64	55	51	46	60	64	53	52	55	58	70	77	68	53	43	52	44	42	51	48	53	56.8			
Fullerton	Maximum... 94	97	99	102	87	85	82	98	100	80	78	75	73	83	92	94	82	85	91	90	103	100	93	81	76	91	75	66	89	80	86	88.2		
	Minimum... 64	63	68	69	69	63	60	68	66	69	66	50	57	50	56	61	60	54	54	59	72	76	70	56	41	51	51	43	51	49	53	59.0		
Garrison	Maximum... 96	98	103	102	84	81	73	93	100	70	75	72	81	87	88	79	88	94	91	103	101	82	70	77	84	65	68	81	79	80	84.5			
	Minimum... 62	59	66	68	61	60	58	59	64	60	51	48	53	45	54	60	54	52	59	60	68	73	62	48	40	49	45	45	51	46	53	55.9		
Golva	Maximum... 93	95	100	97	85	82	83	95	99	90	72	82	72	81	86	87	74	82	85	92	94	98	92	78	66	82	81	78	88	84	83	86.0		
	Minimum... 59	40	62	67	55	57	60	60	62	62	55	63	53	48	54	54	47	59	57	57	62	66	56	46	36	51	44	54	58	44	42	54.2		
Grafton	Maximum... 90	92	90	96	96	84	79	80	90	89	73	76	76	79	86	87	83	82	85	85	97	98	96	88	73	84	83	66	83	79	76	84.5		
	Minimum... 55	60	64	68	61	56	52	60	60	63	60	60	61	52	58	70	62	57	67	61	70	75	86	58	45	46	40	55	52	59.1				
Grand Forks Airport	Maximum... 90	93	94	102	77	85	71	82	94	84	71	76	77	79	90	89	77	81	88	86	99	99	90	73	72	86	64	72	84	75	74	83.0		
	Minimum... 57	62	66	74	61	54	50	60	64	67	57	52	58	52	67	62	60	54	56	66	67	77	61	51	45	56	48	44	55	54	58	58.2		
Jamestown Airport	Maximum... 91	95	99	105	83	88	76	96	98	95	70	79	71	82	90	91	80	85	91	88	103	100	89	76	76	89	69	68	86	83	83	86.3		
	Minimum... 64	58	67	67	59	53	57	66	63	67	57	51	55	48	61	61	57	51	52	59	71	76	60	47	41	54	42	52	48	53	56.9			
Kenmare/	Maximum... 99	94	100	102	87	80	70	88	84	72	76	78	72	80	82	88	77	85	92	87	91	97	79	72	72	79	65	68	79	77	50	56.9		
	Minimum... 63	64	66	67	61	60	55	57	62	64	56	55	56	52	56	61	55	67	65	58	60	69	63	50	43	51	40	42	51	44	45	56.4		
Langdon	Maximum... 94	94	95	98	95	83	75	80	92	83	71	77	74	79	83	83	78	83	89	85	98	100	94	80	74	83	72	68	83	79	81	84.0		
	Minimum... 58	59	64	66	58	55	48	56	58	62	55	59	56	46	56	60	55	52	56	61	65	75	65	42	50	52	35	42	52	42	51	55.2		
Marmarth	Maximum... 95	95	98	97	83	84	84	91	97	90	72	82	72	81	86	87	77	86	93	91	97	94	81	72	81	85	77	77	85	86	80	85.7		
	Minimum... 59	62	66	65	60	60	60	62	62	55	53	53	48	54	54	60	56	57	61	63	62	58	50	48	55	50	57	53	50	58	57.1			
Minot Airport	Maximum... 95	96	103	100	82	77	69	90	90	71	69	76	71	80	82	85	77	88	94	98	98	82	68	73	78	58	69	78	80	78	82.0			
	Minimum... 69	66	71	71	62	62	57	59	67	61	57	53	54	49	57	61	57	58	63	58	67	75	61	56	43	48	44	47	56	50	53	58.5		
Mott	Maximum... 95	100	104	102	98	86	98	105	100	74	78	86	92	90	92	90	90	92	96	102	101	90	80	81	89	81	74	87	86	82	90.3			
	Minimum... 61	56	61	60	52	65	62	61	58	67	56	52	50	50	56	58	57	59	60	62	62	68	61	48	40	57	47	52	55	44	50	56.2		
Pembina Airport	Maximum... 87	93	91	92	77	84	72	78	91	81	71	78	72	77	83	86	77	84	87	83	94	96	87	71	80	67	70	82	77	77	81.1			
	Minimum... 56	59	65	69	60	57	48	60	59	65	57	50	52	57	54	57	60	56	51	57	64	66	76	55	53	47	54	42	39	53	49	56.4		
Sharon	Maximum... 89	93	96	103	85	88	75	92	94	86	71	75	72	80	86	87	77	83	86	83	99	98	90	76	75	85	68	70	85	79	75	83.9		
	Minimum... 57	68	61	65	65	50	50	50	50	61	65	58	48	55	45	54	58	55	53	55	58	64	89	66	56	41	50	42	42	52	48	54	55.3	
Steele	Maximum... 91	94	99	100	84	83	77	93	98	93	68	76	74	78	85	88	78	85	89	88	99	97	86	74	74	85	70	64	84	79	83	84.4		
	Minimum... 61	57	61	67	61	54	55	61	62	63	54	50	52	46	59	64	55	61	66	65	64	68	64	49	41	57	47	43	51	49	54	56.8		
Valley City	Maximum... 90	93	96	103	101	85	85	94	96	95	83	77	76	80	91	91	91	93	88	87	101	99	96	86	73	85	83	66	86	84	82	87.9		
	Minimum... 64	63	70	72	70	53	59	65	67	76	67	49	59	51	61	61	63	55	58	63	70	79	73	57	43	52	51	44	54	49	65	60.5		
Wahpeton	Maximum... 88	95	95	104	103	89	87	98	98	103	103	79	80	83	80	89	87	88	88	90	103	99	97	93	8									

Daily Precipitation for August 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
Eastern Division																																			
Carrington 2	James				T.	.25	.23	.07	T.	.01	1.64	.01	T.					.10															2.37		
Casperston	Red.							.13										.50			T.	.01						.05	.13	.01		.32	1.57		
Courtenay	Sheyenne							.05	.25			1.35						.38										.10	.08	.01		.40	1.73		
Devils Lake 15	James							.20	.16			.97					.08	.06															1.78		
Edgeley	Devils Lake		.43	.08	.02	.33	.01	.16	.02		.38	.43		T.			.26	.09										.38	.07			.15	2.66		
Edmore	James							.44									.08	.05															0.66		
Ellendale	Devils Lake	T.		.10	T.	.40		.11			.33	.58		.04			.42	.11										.15	.05		.14	.21	2.48		
Fargo 15	James					T.	.06										.24											.05	.04				0.44		
Forman	Red.	T.			T.	.05	.60	.01		.01		T.	T.			.01	.29	.01			.19							.62	.07	.04	.01	T.	.68	2.49	
Fullerton	Sheyenne																																	0.21	
Gackle	James	T.			T.	T.	.14							.02			.31				T.							T.	T.	T.			0.47		
Grafton	do							.14			.10	2.06																.16					2.32		
Grand Forks Airport 3	Red.		T.	.41	.01	.40		.01	.20		.04	.71		.06			.35	T.	.69			.05						.08	.01			.24	3.26		
Hankinson 2	do	T.		.61				.35	.16		T.	.55		.01			.04	.69				.32							.12	.04			.14	0.68	
Hannah	Pembina					1.05		.05		.18	1.85	T.	.24	.35				10	2.90	.16														6.64	
Hillsboro	Red.	T.			T.		.95	.35			T.	.35		T.			T.	T.	.98			.25							.06	.03			.40	3.02	
Jamestown Airport 3	James				T.		.37	.35			.70	.30		T.			T.	.15											.07	.03	.25		.03	1.90	
Langdon	Pembina			.03	.10	.90		.02	.46		.04	.30		.07	.05		.47	.10											.03	.03				2.60	
Larimore	Red.			.21				.79										.57			.43													.83	3.56
Lisbon	Sheyenne	.08	.05											.12			.03		.08		.19									.04	.04	.08			0.71
Mayville	Red.			.31		T.		.45				.69		T.	.03		.02		.61		.29								.07	.14				2.51	
McHenry	James					.07		.27	.14			1.20						.11											.04	.06				1.85	
McLeod	Sheyenne									T.																									
Oakes 2	James														.06				.45		.14								.19	.09				0.93	
Park River	Red.		.05		.06	.35		.03	.31		.74	T.		.04			.36	.90				T.							.07				.08	2.99	
Pembina Airport 3	do				.21	.41		.15	.79	.08	.29	.29		.17			.55	.04	T.			T.							.01	.05		T.		2.99	
Petersburg	do			.29		.12		.03	2.11		1.39	1.15					.04	.40											.08	.05			.02	5.71	
Sharon	do			.02				.45	.25		1.25				T.		.10	.45			.06								.06	.07			.20	2.91	
Valley City	Sheyenne				T.			.34					T.				.06		.62										.09	.04	.11			1.26	
Wahpeton	Red.	T.								.22	.06			.06					.28											.11				0.73	
Middle Division																																			
Ashley 3	Missouri							.24	.62		T.			.03			T.	.23			.03								T.		T.			1.15	
Bisbee	Devils Lake					1.09	.06	T.	.02		.35	.52		.20			.21	1.89										.13	.01			T.		4.48	
Bismarck Airport 15	Missouri			T.		.08	.25	.02			.17	.02	.14															.06	T.	.39		T.		1.13	
Bottineau 2	Mouse			.47	.42	.23					2.12	.69		.15	T.		.62	.77	.05					.05					T.	.27			.02	5.59	
Butte	do	.05			1.02	.41	.08	.09	T.		.11	.30		.25					T.															2.58	
Carson	Heart					.44					.27	.06		.15																				1.00	
Center	Missouri				.45		.50	.68			.10	.25	.21																.05	.03			2.28		
Drake 2	Mouse	.13		.03	1.02	.20	.03	.32			.10	.59		.12																			2.81		
Dunseith	do				.02	.50	.34		.03		2.24	T.		.21	T.		.45	.34	.02												.02	T.	.02	4.19	
Eckman	do	.11			.08	.51	.70		.09		1.10	.98		.11			.25	.58															.01	4.72	
Fessenden	James					.19	.03	.28	.11		.11	.44												.22					.03		.16			1.32	
Fort Yates	Missouri				T.	T.	T.	T.				1.50																						1.78	
Foxholm	Mouse					.59	.46	.05		.53	.41	T.		.28			.55	.06	.03						.33				.12					3.27	
Garrison 3	Missouri				T.	.76	.66	.09			.32	.27	.34																					2.78	
Granville	do				.47	.20	.13		.04	.24	.88			.16			.65	.05	.04										T.	.01			.06	2.98	
Hansboro	Devils Lake				T.	.53	.13	.03			1.71	.97		.29			.23	1.35	.03						.02								.03	5.37	
Linton	Missouri				T.	.17	.05				.16	1.58		.05				.11							.02				.01		.12			2.25	
Maddock	Sheyenne																																		
Mandan 2	Missouri					.08	.23	.01	.04		.04	.21		.06																		.50		1.17	
Max 2	do					.60	.78		.09		.02	1.27		.33																				3.51	
McClusky	do	.09				.23	.20				T.	.18		.30																				1.14	
Minot Airport 3	Mouse		T.		T.	.53	.35	.14		T.	.81	.41	.13	T.		.13	T.	T.											T.	.13	T.			3.41	
Mohall	do	.06			.03	.61	.51	.04		.23	.11	.59		.31			.26	.30	.11						.25				T.	T.	T.	T.	T.	3.41	
Napoleon	Missouri					.01	.15	.18	.03			1.92	.01	.08															.09	.05	.01	.26		.42	3.21
New Salem	Heart					.34	.50	.12			.06	.11		.16																	.35			1.64	
Pettibone	James				.04	.08	.66	.07			.01	1.60																			.17			2.70	
Rolla	Devils Lake																T.																		
Rugby	Mouse			.41	.72	.18	.05				.10	.35		.17			.71	.15	.06										.43	T.			T.	3.33	
Selridge	Missouri				T.						.30	1.10	.20																					1.60	
Steele	do				.02	.10	.13	.01			.18	1.60		.04			T.							.24										2.62	
Towner	Mouse		.08			.70	.35				.12	.88			.18		.83												.74		.25	.03		.02	3.88
Turtle Lake	Missouri					.90	.30	.08		T.	.11	.53		.69			T.												.12	.13	.01	T.		2.57	
Tuttle	do				.27	.12	.20				.04	1.20	T.																T.	.12	.09	.03	T.	T.	2.07
Underwood	do				.65	.37	.17				.15	.35		.47			T.													.15	.04			2.35	
Velva	Mouse				.70	.31	.14		.27	.16	.94		.27				.02								T.					.17				3.01	
Washburn	Missouri				.61	.15	.24			.06	.26	.28		.16			.58	.08	.08											.08	T.		T.	1.68	
Westhope	Mouse				.57	.52			.39	.18	.40			.16										.29										3.25	
Willow City	do	</																																	

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis. 9-30-47-1200]

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVI BISMARCK, N. D., SEPTEMBER 1947 No. 9

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The first half of September was very warm with most stations reporting three days with readings of 90° or above. During the last half of the month the temperatures were below the September average with the monthly temperature 1.2° below the period average. Rainy periods prevailed on the 9th-10th, 14th-19th and on the 27th. Precipitation was near the September normal in the east and middle divisions, but it was light and more than a half inch below normal in the western division. The 5.42 inches of rainfall reported at Fessenden is the heaviest September rainfall for that station and the 4.46 inches that fell in a 24 hour period on the 9th-10th is the heaviest 24 hour amount in any month. A severe thunderstorm, for so late in the season, struck Bismarck on the 27th. Lightning struck the Lutheran Church steeple but damage was slight. On the 19th, hail did a minor amount of damage in the Devils Lake area; and on the same date hail broke many windows and damaged car tops in McClusky. Sunshine was slightly below normal. The first general frost occurred on the 22d, but while it was a shorter than normal growing season, most crops had matured with much above average yields of small grains. Except for delay caused by rains, most threshing was completed this month with the exception of some flax. Potato digging and beet lifting were nearing completion in the Red River Valley. Fall plowing was general, but it was still too dry in some areas in the southeast portion. High wind on the 13th-14th did considerable damage to late swathed grain. A prairie fire occurred near Fullerton on the 22d, other fires caused a minor amount of damage in various localities over the state.—M.S.C.

TEMPERATURE

The mean temperature for the state was 55.5°, or 1.2° below the 1892-1947 average for September. The mean temperature for the eastern division was 56.3°; for the middle division, 55.0°; and for the western division, 55.3°. The highest mean temperature was 61.8° at Wahpeton, and the lowest, 49.9° at Belcourt, making a range in mean temperature of 11.9°. The absolute range was 88°, from 101° at Edgeley and Jamestown on the 5th, to 13° at Wishek on the 22d. The average daily excess in temperature for the state since January 1, 1947, is 0.3°.

PRECIPITATION

The average precipitation for the state was 1.45 inches, or 0.12 inch less than the 1892-1947 average for September. In the eastern division the average amount was 2.13 inches; in the middle division, 1.49 inches; and in the western division, 0.74 inch. The greatest monthly amount reported was 5.42 inches at Fessenden; the least was 0.26 inch at Marmarth. The greatest amount recorded in any 24 consecutive hours was 4.46 inches at Fessenden on the 9-10th. The accumulated excess in precipitation for the state since January 1, 1947, is 0.39 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.72	29	29.38	13	11.2	40	nw.	14	74	85	49	47	59	275
Devils Lake....	30.73	29	29.28	13	9.0	27	nw.	14	77	84	50	54	45	339
Fargo.....	30.68	29	29.28	13	12.8	40	w.	14	77	85	55	58	58	281
Williston.....	30.66	29	29.32	7	8.0	34	w.	13	75	85	52	49	62	316

† And other dates.

COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	59.2	101	24	1.08	1.05	0.40	0.84	0	4	16	7	7	
1893...	57.1	102	8	0.75	0.75	0.94	0.81	0.1	4	18	7	5	
1894...	58.2	104	18	1.06	1.67	1.42	1.38	0	5	15	7	8	
1895...	56.6	100	12	1.29	0.61	0.42	0.77	0	4	12	12	6	
1896...	53.0	98	11	2.25	2.00	0.57	1.61	0	6	12	8	10	
1897...	64.1	109	18	0.24	0.25	0.35	0.28	0	2	20	7	3	
1898...	56.8	98	10	1.85	1.00	0.90	1.25	0	4	14	9	7	
1899...	55.0	101	11	0.60	0.57	0.57	0.58	T.	3	17	9	4	
1900...	54.6	98	17	5.15	5.26	4.44	4.95	T.	8	12	7	11	
1901...	53.6	100	12	2.41	1.80	1.82	2.01	T.	7	10	8	12	
1902...	53.6	95	15	1.24	0.54	0.44	0.74	0	4	16	8	6	
1903...	51.6	90	18	3.36	2.85	2.77	2.99	0.7	7	12	6	12	
1904...	54.7	96	18	2.12	1.18	1.00	1.43	0	5	14	7	9	
1905...	59.8	104	23	1.62	1.65	1.74	1.67	0	5	16	8	6	
1906...	62.8	109	20	1.54	0.73	1.07	1.11	0	4	19	6	5	
1907...	52.1	96	9	2.39	1.11	0.68	1.39	T.	6	14	8	8	
1908...	60.7	104	16	0.87	0.89	1.97	1.24	0.2	4	17	7	6	
1909...	59.0	93	24	1.03	0.77	1.04	0.95	0	4	16	8	6	
1910...	55.3	99	18	2.38	1.88	1.10	1.79	0.1	4	14	7	9	
1911...	54.9	95	21	2.32	2.41	2.38	2.37	T.	8	12	8	10	
1912...	51.5	101	18	3.54	2.50	1.82	2.62	0	10	11	6	13	
1913...	57.2	108	8	2.39	1.47	1.37	1.74	0.4	6	16	8	6	
1914...	59.3	98	25	1.24	1.00	0.84	1.03	0	5	16	8	6	
1915...	54.6	104	23	2.42	2.60	1.94	2.32	0	9	10	8	12	
1916...	55.1	99	15	2.12	1.07	1.10	1.43	T.	6	14	9	7	
1917...	56.4	97	16	1.53	0.93	0.65	1.04	0	5	12	9	9	
1918...	51.9	93	11	0.46	0.40	0.33	0.40	T.	3	15	9	6	
1919...	58.6	100	20	0.92	1.05	0.86	0.94	0.3	5	12	10	8	
1920...	59.0	99	19	3.94	1.19	1.49	2.21	T.	8	15	9	6	
1921...	57.0	101	25	3.91	3.37	2.34	3.21	T.	12	12	10	8	
1922...	59.8	104	23	2.42	2.00	1.89	2.10	0	6	16	8	6	
1923...	60.1	99	15	2.04	2.25	3.25	2.51	0	6	14	8	8	
1924...	55.0	98	20	3.68	1.91	0.68	2.09	T.	7	15	7	8	
1925...	58.1	103	20	4.18	2.23	1.61	2.67	T.	8	12	8	10	
1926...	52.3	95	9	2.80	2.44	1.66	2.30	0.5	9	11	9	10	
1927...	56.8	101	10	1.06	0.47	1.48	1.00	T.	3	16	9	5	
1928...	53.9	95	12	1.50	0.75	0.74	1.00	T.	5	17	7	6	
1929...	52.7	105	12	1.65	1.82	1.47	1.65	0	5	11	9	10	
1930...	56.2	98	10	1.02	0.88	1.17	1.02	0	4	16	9	5	
1931...	61.4	107	27	1.97	2.38	2.06	2.14	T.	6	18	7	5	
1932...	56.8	102	22	1.10	0.56	0.23	0.63	0	3	18	8	4	
1933...	60.9	101	22	1.03	0.71	0.70	0.81	0	4	16	8	6	
1934...	52.4	95	9	1.28	0.86	0.74	0.96	2.0	7	11	9	10	
1935...	57.2	105	16	0.73	0.44	0.12	0.43	0	3	15	9	6	
1936...	60.3	102	12	1.47	1.29	0.68	1.15	T.	5	15	10	5	
1937...	58.6	104	20	1.21	1.60	1.61	1.47	0.1	6	13	9	8	
1938...	61.9	99	21	0.95	0.34	0.61	0.63	0	4	17	7	6	
1939...	58.9	98	11	1.12	0.47	0.45	0.68	0.2	5	15	8	7	
1940...	62.8	103	20	0.87	0.98	1.32	1.06	0	4	17	9	4	
1941...	55.3	94	17	5.22	4.71	3.91	4.61	0.2	11	9	10	11	
1942...	54.0	99	4	1.71	1.62	1.67	1.67	2.7	9	12	9	9	
1943...	55.6	94	19	0.84	0.37	0.33	0.51	0	4	17	9	4	
1944...	56.4	91	21	1.32	1.55	1.50	1.46	T.	8	12	10	8	
1945...	54.5	103	14	3.18	1.73	1.50	2.14	0.1	9	11	9	10	
1946...	56.3	97	18	4.12	2.05	1.38	2.52	T.	8	11	9	10	
1947...	55.5	101	13	2.13	1.49	0.74	1.45	T.	7	11	9	10	
Period	56.7	109	4	1.94	1.47	1.29	1.57	0.1	6	14	8	8	

Climatological Data for September 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelting	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	55.0	.....	97	5	21	26	2.49	.....	1.18	10	0	9	14	6	10	nw.	Albert Thoren.
Carrington	Foster	1,579	50	54.5	-2.4	95	5	20	25	2.14	+0.72	0.87	10	0	10	9	4	17	.....	Soo Line Agent.
Casselton	Cass	934	52	58.8	+0.9	95	5	31	22	1.84	-0.06	0.81	9-10	0	10	12	8	10	n.	Ashton Lockhart
Cavalier	Pembina	894	40	53.0	-2.6	95	5	25	22	3.53	+1.21	1.34	19	0	8	10	10	10	se.	City Light & Power Co.
Colgate	Steele	1,180	14	.....	.....	.....	.....	.....	.....	2.91	+1.08	1.30	9-10	0	7	8	14	8	nw.	O. M. Jensen.
Cooperstown	Griggs	1,423	51	56.5	-1.2	99	5	19	22	2.46	+0.70	1.06	27	0	5	10	5	15	nw.	R. J. Lockner
Courteau	Stutsman	1,523	17	.....	.....	.....	.....	.....	.....	2.17	+0.33	1.57	10	0	5	10	15	5	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	55.0	-0.9	94	5	25	24	2.95	+1.32	1.66	9-10	0	9	10	8	12	w.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	47	57.4	-0.9	101	5	18	22	1.01	-0.65	0.75	10	0	7	10	10	10	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	52.8	-3.6	94	5	20	22	4.32	+2.47	1.86	19	0	10	15	6	9	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	59.1	+0.3	94	5	21	22	0.64	-1.04	0.20	4	0	5	15	5	10	se.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	57.7	-0.5	99	5	24	22	2.28	+0.06	1.13	9-10	0	10	11	9	10	n.	U. S. Weather Bureau.
Foran	Sargent	1,249	56	60.7	+1.2	99	5	27	29	0.79	-1.28	0.26	10	0	5	16	4	10	nw.	Art Waterman.
Fullerton	Dickey	1,439	50	59.2	+1.2	98	5	21	22	0.77	-1.19	0.26	9-10	0	6	8	15	7	nw.	F. O. Ahn.
Gackle	Logan	1,951	17	57.2	-0.6	.....	.....	20	22	2.04	+0.46	1.56	11	0	3	11	14	5	ne.	Tony Martin.
Grafton	Walsh	1,827	56	55.7	-1.3	100	5	22	30	3.46	+1.30	1.74	10	0	10	13	7	10	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	55.2	-1.7	98	5	24	22	1.77	-0.15	0.81	27	0	10	7	9	14	w.	University of N. Dak.
Grand Forks Airt. 2 1/2 mi. W	Grand Forks	834	7	54.9	.....	99	5	23	22	2.29	.....	0.79	27	0	8	8	10	12	se.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	60.2	-0.3	98	5	29	26	1.36	-0.74	0.60	10	0	7	8	8	14	se.	Soo Line Agent.
Hanuah	Cavalier	1,568	54	52.0	-2.8	88	4	22	22	2.05	-0.06	0.53	19	0	11	10	14	6	nw.	A. E. Prior.
Hillsboro	Trall	901	42	58.0	-1.0	99	5	24	22	2.11	+0.04	0.50	27	0	7	6	16	8	sw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	57.8	+0.8	101	5	22	22	1.52	-0.15	1.01	10	0	7	5	9	16	n.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	7	55.7	.....	100	5	20	22	2.34	.....	1.70	10	0	10	12	7	11	n.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	1	55.6	.....	96	5	18	22	1.74	.....	0.67	10	0	6	9	8	13	.....	U. S. Wildlife Refuge.
LaMoure	LaMoure	1,111	1	58.5	.....	98	5	17	22	0.64	.....	0.48	9-10	0	10	9	8	13	.....	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	53.8	+0.3	92	4	19	24	2.75	+0.52	0.90	10	0	12	12	7	11	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	55	55.8	-0.6	99	5	25	22	2.40	+0.35	1.08	9-10	0	9	7	8	15	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	56.0	-2.1	98	5	21	22	0.89	-1.11	0.31	1	0	6	15	4	11	nw.	J. O. Halverson.
Mayville	Trall	975	52	58.0	-0.5	99	5	26	22	2.98	+0.92	1.50	10	0	9	9	14	7	n.	H. A. Ragatz.
McHenry, 6 miles NNE	Eddy	1,509	25	54.6	-1.2	96	5	20	22	2.09	+0.66	1.28	9-10	0	9	12	8	10	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	19	59.0	0.0	99	5	20	22	0.64	-1.12	0.26	4	0	5	17	8	5	n.	Harold Feldner
Oakes	Dickey	1,318	19	59.0	0.0	99	5	20	22	0.64	-1.12	0.26	4	0	5	17	8	5	n.	C. M. Hagen.
Park River	Walsh	998	44	55.9	-1.0	99	5	27	22	3.02	+0.87	0.96	9-10	0	9	16	6	8	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	53.3	-1.2	92	4	24	25	3.89	+1.71	1.95	19	T.	11	8	10	12	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	54.6	.....	95	5	22	24	3.18	+1.21	1.65	10	0	7	16	5	9	uw.	T. C. Overland.
Sharon	Steele	1,516	24	55.0	-2.4	97	5	19	22	2.46	+0.41	0.90	10	T.	11	13	6	11	ne.	Hugh Lyon.
Valley City	Barnes	1,229	43	58.0	-0.8	98	5	21	22	1.25	-0.54	0.70	9-10	0	6	14	7	9	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	61.8	+1.8	99	5	23	22	1.40	-0.82	0.64	9-10	0	7	13	11	6	nw.	State School of Science.
Average for Eastern Division				56.3	-1.2	101	5	17	22	2.13	+0.19	1.85	19	T.	8	11	9	10	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	56.0	-1.9	95	3	21	22	1.71	+0.24	0.93	11	0	10	12	4	14	ne.	Eddie H. Glur.
Belcourt	Rolette	1,930	3	49.9	.....	85	2	15	22	1.69	.....	0.48	14	0	11	11	10	9	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	53.6	-3.1	91	4	20	22	1.69	0.00	0.46	18	0	7	13	5	12	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	57.0	-1.1	94	2	26	22	1.42	-0.02	0.63	9-10	0	7	11	8	11	nw.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE.	Burleigh	1,650	8	57.0	-0.3	93	2	25	22	1.50	-0.27	0.60	9-10	0	8	11	8	11	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	53.8	-1.7	97	2	17	24	1.17	-0.42	0.47	13-14	0	11	7	11	12	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	55.0	-2.5	83	4	21	29	1.47	-0.01	0.44	9-10	0	9	12	4	14	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	36	58.0	-0.1	94	2	24	22	1.03	-0.41	0.77	9	0	4	8	10	12	se.	J. W. Evans.
Center	Oliver	2,100	10	54.8	.....	92	2	20	22	0.95	.....	0.28	16-17	0	8	7	18	5	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	54.3	-3.3	89	2	22	24	1.88	+0.45	0.49	27	0	11	15	15	0	se.	Geo. A. Pauls.
Dunseith, 2 miles NNE	Rolette	1,682	52	53.0	+2.0	84	2	20	21	1.20	-0.47	0.58	14	0	8	8	12	10	nw.	State Tuberculosis San.
Eckman	Bottineau	1,500	42	51.6	-4.1	88	2	15	24	0.90	-0.60	0.32	9-10	0	7	15	9	6	w.	E. R. Sherman.
Fessenden	Wells	1,610	36	56.5	-0.1	94	4	24	24	5.42	+3.91	4.46	9-10	0	6	7	17	6	s.	John V. Zuber.
Fort Yates	Sioux	1,670	48	60.6	+0.4	99	4	22	30	0.71	-0.74	0.60	27	0	2	14	7	9	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	27	54.7	-1.5	89	2	20	29	1.25	-0.30	0.56	18-19	0	7	6	6	18	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	54.4	-1.5	90	2	22	29	1.07	-0.39	0.29	9-10	0	10	11	4	15	n.	Mae H. Vorachek.
Granville	McHenry	1,504	41	54.5	-1.4	89	2	18	24	0.43	-1.13	0.15	18-19	0	6	22	3	5	nw.	Fred Roble.
Hansboro	Towner	1,597	40	51.4	-2.8	88	4	20	24	1.20	-0.66	0.25	27	0	8	7	10	13	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	.....	.....	.....	.....	3.02	+1.59	1.44	9-10	0	8	7	6	17	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	54.8	.....	92	2	21	24	2.80	.....	0.93	10	0	8	4	18	8	se.	John Dalmage.
Linton	Emmons	1,711	31	58.8	-1.0	97	5	18	21	1.11	-0.46	0.73	27	0	4	11	8	11	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....</

Climatological Data for September 1947-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Western Division—Con.																					
Dickinson Airpt., 5½ mi. S.	Stark	2,587	7	55.2	.....	90	7	28	22	1.00	.....	0.70	9-10	0	6	13	3	14	w.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	49	54.6	-1.9	89	7	25	22½	0.66	-0.74	0.29	17	0	4	9	8	13	nw.	O. T. Evenson.	
Elbowoods	McLean	2,082	55	53.6	-3.9	87	4½	19	29	0.37	-1.12	0.17	9	0	4	13	12	5	ne.	H. W. Case.	
Epping	Williams	2,224	39	55.2	-1.5	88	2	23	24	0.80	-0.49	0.22	6½	0	7	11	10	9	se.	T. Beachler.	
Fairfield, 9½ miles N.	Billings	2,650	19	.....	.....	.....	.....	.....	.....	0.79	-0.59	0.38	16-17	T.	4	10	7	13	se.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	7	56.0	-1.4	95	7	26	26	0.60	-0.67	0.30	19	0	3	9	18	3	sw.	Chester K. Puda.	
Grenora	Williams	2,114	39	56.6	+1.3	89	2	20	29	0.83	-0.40	0.33	6	0	6	12	14	4	w.	L. D. Nielson.	
Halliday	Dunn	2,073	6	.....	.....	.....	.....	.....	.....	0.62	.....	0.16	18	0	8	19	8	3	nw.	John Kisse.
Hettinger	Adams	2,675	41	56.4	-2.2	93	2	23	15½	0.67	-0.63	0.43	17-18	0	2	13	10	7	nw.	Edgar Martin.	
Kenmare	Ward	1,799	16	55.4	-0.8	91	4	22	29	0.94	-0.63	0.54	18-19	0	8	14	5	11	se.	Theo. E. Eckberg.	
Marmarth	Slope	2,714	39	56.8	-1.0	96	4	26	25	0.26	-1.00	0.15	29	T.	4	9	6	15	nw.	S. P. Grane.	
Medora, 1½ mi. W.	Billings	2,271	33	54.4	.....	92	.....	.....	.....	1.10	-0.22	0.87	16	0	4	21	5	4	w.	Harry Roberts.
Mott	Hettinger	2,424	41	57.5	-0.3	92	2½	23	22	0.42	-0.95	0.16	29	0	5	11	9	10	nw.	Northern Pacific Agent.	
New England	Hettinger	2,621	56	57.3	-0.1	93	7	25	22	0.36	-1.01	0.12	29	T.	5	9	14	7	nw.	Alfred Hasel.	
New Hradec, 1 mile E.	Dunn	.....	6	55.5	.....	88	7	28	15	0.48	.....	0.36	16-17	0	6	10	9	11	nw.	Peter F. Fieck.
Parshall	Mountain	1,929	33	53.4	-1.9	87	2½	17	29	0.83	-0.66	0.35	19	0	10	9	19	2	nw.	C. E. Shubert.	
Portal	Burke	1,954	34	53.1	-2.1	85	2½	20	24	1.32	-0.14	0.38	14	0	10	12	7	11	sw.	U. S. Customs Service.	
Powers Lake	Burke	2,205	43	.....	.....	.....	.....	.....	.....	0.75	.....	0.30	5	0	3	16	6	8	nw.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	32	58.0	-0.2	90	2	27	24	0.55	-0.77	0.17	17	0	6	9	10	11	nw.	Assumption Abbey.	
Ryder	Ward	2,108	19	.....	.....	.....	.....	.....	.....	0.76	-0.76	0.31	9-10	0	8	12	7	11	nw.	S. C. Schellenbaum.
Sanish	Mountain	1,835	22	53.2	-4.3	89	4	21	29½	0.79	-0.55	0.33	19	0	11	19	4	7	w.	H. J. Bugge.	
Stanley	Mountain	2,258	10	52.7	.....	86	2½	19	29	0.82	.....	0.33	14	0	7	8	7	15	nw.	Leroy Edwards.
Tagus	Mountain	2,179	19	.....	.....	.....	.....	.....	.....	1.54	+0.14	0.70	18-19	0	11	11	9	10	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	19	.....	.....	.....	.....	.....	.....	0.75	.....	0.30	5	0	3	16	6	8	nw.	L. A. Simon.
Trotters	Golden Valley	.....	22	.....	.....	.....	.....	.....	.....	0.32	-0.91	0.18	18	0	3	7	17	6	se.	Walter Grunewald.
Van Hook	Mountain	1,864	7	54.8	.....	91	7	22	29	1.14	.....	0.85	19	0	8	11	10	9	nw.	H. Glenn Sims.
Watford City	McKeuzie	2,084	35	56.4	-1.3	89	2	21	25	0.57	-0.74	0.30	18-19	0	9	11	15	4	e.	J. C. Zeller.	
Wildrose	Williams	2,258	18	.....	.....	.....	.....	.....	.....	1.20	+0.01	0.36	6	0	9	18	4	8	nw.	Jonathan Winkler.
Williston	Williams	1,878	69	55.2	-1.4	87	2	27	24	0.63	-0.46	0.21	9	0	7	7	12	11	se.	U. S. Weather Bureau.	
Average for Western Division				55.3	-1.6	99	7	17	29	0.74	-0.55	0.87	16	T.	7	12	9	9	nw.		
Average for the State				55.5	-1.2	101	5	13	22	1.45	-0.12	4.46	9-10	T.	7	11	9	10	nw.		

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for September 1947

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum...	85	94	95	89	94	76	88	78	80	68	69	79	85	68	63	62	57	57	57	73	63	68	50	78	63	64	63	70	56	44	71.2	
	Minimum...	55	50	45	46	52	51	53	53	49	58	50	43	44	43	33	32	41	47	41	50	41	21	24	27	28	26	25	45	25	23	40.7	
Bismarek Airport	Maximum...	86	93	89	93	90	77	91	81	70	68	74	81	81	56	61	57	59	54	59	70	56	78	82	49	65	67	66	72	49	45	70.6	
	Minimum...	55	49	47	57	52	55	52	50	46	52	46	44	49	39	32	44	48	48	48	50	30	25	44	29	29	30	49	42	27	38	43.5	
Bottineau	Maximum...	83	87	86	86	85	73	78	78	74	65	72	81	81	62	58	60	59	51	55	63	62	74	74	52	58	62	62	58	51	48	67.9	
	Minimum...	51	51	48	51	56	46	49	60	44	52	38	40	45	41	30	41	44	44	47	35	38	18	37	17	18	30	44	24	21	25	39.8	
Carson	Maximum...	88	94	91	92	90	80	93	84	70	65	85	83	80	58	68	60	58	55	60	71	60	80	85	51	68	67	70	73	48	45	72.1	
	Minimum...	52	49	49	52	60	53	50	60	52	52	42	44	54	44	31	41	45	46	46	45	39	24	41	26	35	35	47	42	26	33	43.8	
Crosby	Maximum...	83	86	78	86	72	71	78	73	66	71	75	83	66	54	55	63	49	48	62	67	47	79	73	52	59	67	58	55	50	49	65.7	
	Minimum...	51	47	48	46	53	46	46	54	42	42	37	43	43	39	28	31	40	40	42	35	37	25	35	19	21	24	38	39	18	21	37.7	
Devils Lake	Maximum...	84	89	84	92	94	73	80	80	76	63	71	82	82	54	59	62	58	52	54	66	52	66	62	49	56	60	51	64	48	44	66.9	
	Minimum...	55	53	52	64	50	48	48	55	45	53	44	51	49	43	35	44	47	47	48	49	29	26	35	25	30	31	45	34	28	30	43.1	
Dickinson Airport	Maximum...	85	88	80	87	78	77	90	78	75	64	78	80	77	55	63	59	58	49	61	67	53	78	83	45	61	67	68	69	44	46	68.6	
	Minimum...	54	48	50	50	56	47	50	48	50	47	43	47	46	36	32	41	44	45	46	41	29	28	38	29	34	40	41	29	35	.....	41.9
Dunn Center	Maximum...	83	88	78	87	74	77	89	74	70	65	75	81	72	54	59	62	55	49	62	68	52	77	82	48	59	65	67	69	47	46	67.8	
	Minimum...	54	46	43	48	51	49	48	59	40	50	41	45	48	44	31	36	42	45	46	42	43	25	40	28	27	41	44	25	33	.....	41.4
Fargo Airport	Maximum...	82	88	93	91	99	76	85	91	69	68	66	80	85	62	62	66	62	65	76	71	54	61	68	48	58	61	50	61	48	45	69.7	
	Minimum...	55	54	54	62	56	53	63	62	58	58	48	43	53	47	40	41	50	49	55	49	30	24	41	32	28	27	45	38	30	36	45.7
Fessenden	Maximum...	85	93	86	94	91	76	85	81	75	63	72	83	79	62	60	63	59	53	67	64	60	71	76	52	58	63	55	67	48	45	69.5	
	Minimum...	55	51	50	62	54	48	44	66	41	54	42	48	54	43	34	42	47	48	45	42	41	25	41	24	28	27	45	43	24	35	43.5	
Fullerton	Maximum...	85	90	92	89	98	78	87	85	78	71	69	79	86	65	64	64	62	63	64	73	66	66	73	65	62	67	66	72	51	46	72.5	
	Minimum...	58	54	49	62	51	52	53	70	51	62	48	41	45	50	33	41	45	50	52	51	43	21	43	28	32	29	46	48	26	37	45.8	
Garrison	Maximum...	85	90	81	88	81	77	87	76	63	66	76	82	75	64	62	61	54	50	60	67	54	76	82	52	62	66	61	71	47	47	68.4	
	Minimum...	54	47	46	55	51	49	50	51	40	49	37	41	46	38	32	38	46	45	47	40	27	24	37	25	26	29	47	40	22	36	40.5	
Golva	Maximum...	85	90	79	88	78	84	95	86	76	79	76	80	75	62	64	57	66	51	61	66	60	83	71	51	62	68	66	68	48	59	71.1	
	Minimum...	52	46	50	56	49	48	52	48	41	40	38	38	42	32	32	41	41	36	46	37	38	39	40	43	28	26	35	46	33	35	40.9	
Grafton	Maximum...	84	88	88	94	100	79	76	84	74	66	68	78	81	74	60	61	60	57	60	66	63	62	62	50	57	58	57	50	48	48	68.4	
	Minimum...	57	50	52	65	50	48	41	61	41	58	40	61	50	45	37	37	44	48	48	49	38	25	42	28	27	25	32	40	28	22	43.0	
Grand Forks Airport	Maximum...	82	87	89	92	99	72	78	85	73	65	67	79	83	57	59	65	68	63	55	65	70	49	63	61	48	57	60	47	52	49	46	67.2
	Minimum...	55	52	54	62	59	42	53	46	54	45	46	58	52	45	38	40	48	48	51	44	26	23	36	28	27	45	35	28	30	.....	42.6
Jamestown Airport	Maximum...	85	89	92	91	100	76	86	83	74	65	71	80	83	57	62	62	59	58	56	70	54	68	77	51	60	65	51	70	51	42	69.6	
	Minimum...	55	52	49	57	48	50	50	48	41	53	47	44	48	42	35	40	48	46	48	49	26	20	38	26	24	25	47	36	26	36	41.8	
Kennmare	Maximum...	86	90	77	91	78	71	81	78	67	71	80	82	72	55	64	62	50	50	66	67	52	79	67	61	64	65	60	67	49	47	68.3	
	Minimum...	52	47	48	50	52	44	46	56	52	52	40	50	59	43	34	40	43	43	44	43	43	29	39	23	25	37	44	45	22	30	42.5	
Langdon	Maximum...	84	90	88	92	92	73	77	83	78	70	72	81	80	60	62	62	52	49	53	63	60	62	61	59	62	58	53	54	53	45	67.0	
	Minimum...	49	45	51	61	54	42	43	60	42	55	87	44	53	42	30	32	42	43	45	44	43	33	20	35	19	22	29	40	41	21	27	40.0
Marmarth	Maximum...	84	92	75	95	82	75	95	92	80	70	75	80	75	67	66	58	58	55	48	55	61	66	60	79	85	75	65	72	66	68	46	72.1
	Minimum...	48	42	48	45	56	52	53	52	39	50	36	36	42	42	27	46	44	46	48	26	43	31	38	32	26	40	42	42	32	34	41.5	
Minot Airport	Maximum...	83	88	79	87	78	73	84	80	62	64	74	82	74	54	57	67	54	50	60	65	52	78	73	52	58	65	67	70	71	57	47	66.9
	Minimum...	57	54	52	60	51	50	50	51	49	50	42	51	45	40	33	40	46	45	47	43	26	24	32	25	25	35	43	36	24	32	41.9	
Mott	Maximum...	90	92	68	90	85	86	92	90	78	70	75	83	79	60	67	59	57	56	58	70	64	78	84	75	66	67	70	71	57	47	73.5	
	Minimum...	46	43	41	50	49	48	54	59	40	50	39	48	47	44	27	40	44	46	48	41	42	22	41	25	27	30	40	43	32	34	41.5	
Pembina Airport	Maximum...	78	85	88	92	91	70	74	83	79	62	70	82	80	55	59	62	57	53	54	63	50	58	54	47	55	57	48	49	50	50	65.2	41.5
	Minimum...	55	51	56	62	50	47	44	51	40	54	42	46	52	44	39	34	45	46	49	46	30	25	34	26	24	26	41	33	27	24	41.4	
Sharon	Maximum...	83	88	90	90	97	74	80	83	74	65	70	80	81	61	60	64	61	53	60	67	52	63	67	50	60	60	48	67	50	41	68.0	
	Minimum...	55	50	48	62	49	47	45	63	46	55	43	45	50	44	32	41	45	44	47	47	36	19	37	25	29	41	40	25	29	.....	42.1
Steele	Maximum...	83	88	88	90	91	77	86	81	77	65	70	78	80	60	60	59	60	54	55	68	60	71	77	54	60	64	60	69	49	44	69.2	41.5
	Minimum...	52	49	47	61	53	50	49	56	41	55	45	43	51	45	30	40	46	45	48	49	42	21	43	24	27	30	45	41	24	35	43.0	
Valley City	Maximum...	83	87	89	89	98	87	86	85	80	71	67	78	83	72	70	63	62	58	61	70	67	64	69	50	57	62	57	67	55	47	71.1	
	Minimum...	55	52	47	65	48	54	51	70	46	60	48	42	49	47	36	42	49	46	51	52	44	21	42	31	22	22	42	48	29	32	44.8	
Wahpeton	Maximum...	88	92	91	92	99	96	90	93	84	79	69	76	88	82	66	69	67	73	85	73	71	60	70	68	62	63	62	63	53	47	76.0	
	Minimum...	54	58	56	65	57	54	59	59	61	64	53	42	50	48	38	44	54	53														

Daily Precipitation for September 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James										.87	.47			.04	.17			.02	.02	.04					.02			.14	.35			2.14	
Casselton	Red									.02	.79	T.			.08		T.	.10		.01	.02	.09	.01			.15			.57	T.			1.84	
Cooperstown	Sheyenne										.77				.14					.22	T.				.27				1.06				2.46	
Courtenay	James										1.57						.16			.04	T.								.25				2.17	
Devils Lake ^{1 5}	Devils Lake			.03			T.		T.	1.22	.45				.12		.04	.05			.26		T.		.14				.64				2.95	
Edgeley	James		.15							T.	.75				.02					.02	.03	.01	T.								.03		1.01	
Edmore	Devils Lake						T.				1.45				.17	.01		T.	.10	1.86		.11		.15	.15				.30	.03			4.32	
Ellendale	James		.20								.02									T.	.10								.19			.13	0.64	
Fargo ^{1 5}	Red									.46	.82			T.	.07		T.	.06	.28	.03	.05	.01			.32	T.			.18	T.			2.28	
Forman	Sheyenne			.02							.26											.11							.18			.22	0.79	
Fullerton	James		.17								.18	.08									.07								.18			.09	0.77	
Gackle	do											1.86							.08	.10												2.04		
Grafton	Red						T.			T.	1.74				.11					.15	.46	.02	.07		.08	.37			.39	.07			3.44	
Grand Forks Airport ³	do									T.	.25	.74			.14		T.	.01	.03	T.		.25	.01	T.	.32				.79	T.			2.29	
Hankinson ²	do		.14							T.	.60	T.													.05				.19	.03			1.36	
Hannah	Pembina								.05	T.	.62				.10				.16	.03	T.	.58	.10		.31				.42				2.05	
Hillsboro	Red						T.			T.	.62				.14					.02	.07	T.	.02	T.		.44			.80	T.			T.	2.11
Jamestown Airport ³	James		T.	.02						T.	1.70				.06		.07		T.	.09	.06	.01	.02		.07		T.		.24				2.34	
Langdon	Pembina						.06				.90				.08				.10	.28	.45	.02	.06		.15	.18			.32	.15			T.	2.75
Larimore	Red										.05	1.08			.07					.03	.08		.08		.16	.23			.62				2.40	
Lisbon	Sheyenne	.31									T.	1.50								.02	.08	T.	.15			.08			.11	T.			0.89	
Mayville	Red									T.	1.50				.10					.02	.08	T.	.15			.29			.92	.01		.01	2.98	
McHenry	James									.17	1.11				.15					.01		.02			.15	.18			.28			.02	2.09	
McLeod	Sheyenne																																	
Oakes ²	James			.26							T.									.05		.10							.15			.08	0.64	
Park River	Red										.96				T.				.02	.03	.68		.08		.10	.38			.76			.01	3.02	
Pembina Airport ³	do		T.				.04		.02		.45				.07				.57	.03	1.95	T.	.02	T.	.38				.54	.02			3.89	
Petersburg	do										1.65				.14					.02	.04		.08		.15				1.10				3.18	
Sharon	do									T.	.90				.06				.06	.06	.05		.02		.10	.35	T.		.80	.03	T.	.03	2.46	
Valley City	Sheyenne										.70								.10	.07	T.		.03		.10				.25				1.25	
Wahpeton	Red		.01								.53	.11			.19							.14			.18				.24				1.40	
Middle Division																																		
Ashley ³	Missouri			.28								.93			.03	.02				.02	.02	.02							.20	.15		.04	1.71	
Bisbee	Devils Lake										.35	.30			.10					.46	.27				.13				.08				1.69	
Bismarck Airport ^{1 5}	Missouri		T.						T.		.45	.15			.06		.21	T.		.04	.27		T.				T.		.31		T.	.01	1.50	
Bottineau ²	Mouse			.03		.10					.30	.01			.47	.03	.01	.02	T.	.09	.01	T.		T.				T.		.25			1.17	
Butte	do					.03					.11	.33			.15				.15	.27		.04							.25				1.47	
Carson	Heart										.77									.12	.07										.07		1.03	
Center	Missouri										.14	T.			.13		.25	.03	.10	.10		.05							.15				0.95	
Drake ²	Mouse					.02					.43	.13			.07			.05	.14	.42	.06	.05							.49	.02			1.88	
Dunseith	do					.12					.21				.58			.03	.01	.13				.02					.10				1.20	
Eckman	do	.01				.13					.32				.12				.09	.22	.01												0.90	
Fessenden	James									1.55	2.91				.26					.45			.11						.14				5.42	
Fort Yates	Missouri										.11																		.60				0.71	
Foxholm	Mouse				.28						.08	.12			.24				.23	.56		.01							.02				1.25	
Garrison ³	Missouri				.05						.13	.16			.24		.10	.10	.10	.07				.06					.10				1.07	
Granville	Mouse			T.		.05					.11				.02				.05	.10									.10				0.43	
Hansboro	Devils Lake					.09					.07				.21			.13	.06	.23				.16					.25				1.20	
Linton	Missouri										.17				T.							.13							.73		.03		1.11	
Maddock	Sheyenne																																	
Mandan ²	Missouri										1.28	.04			.06	.01			.21	.04	.08	T.	T.						.05	T.		T.	1.77	
Max ²	do	T.									.15	.11			.11				.07	.09	.20	.02							.09				0.84	
McClusky	do										1.63				.19		.03			.06	.05	.90		.06					.18	.02			3.12	
Minot Airport ³	Mouse		.06	T.		.05					.19	.08			T.			.12	.02	.08	.03	.33							.08			.01	0.59	
Mohall	do					.03					T.							.02	.08	.03	.33												0.61	
Napoleon	Missouri			.08							.55				.10				.01	.08	.02	.04	.02						.34			.05	1.29	
New Salem	Heart										.22	.08			.01		.14	.14	.08	.24									.10		.03		1.04	
Pettibone	James										.60	.93			.12			.11	.															

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Not Test

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVI BISMARCK, N. D., OCTOBER 1947 No. 10

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GENERAL SUMMARY

The month of October was unusually warm with no periods of cold weather. It was the warmest October since state averages have been kept, beginning in 1892. At many stations, it was the warmest October since records have been kept, this being true especially over the east portion, where both Fargo and Devils Lake exceeded previous high mean temperatures. Precipitation varied greatly but generally speaking was well above normal over the east and central sections and below normal over the west portion. Many long time records for greatest October precipitation were broken, especially in the middle division at such long records as Napoleon, Steele and Fort Yates. Showers were heavy on the 11th-12th and 30th-31st, with snow general on the 23d over the middle and west portions. The snow, in many cases, melted as it fell; in all cases, it disappeared within 48 hours. There were twice the average number of thunderstorms. On the 30th at Bismarck, the thunder was of several hours duration. Fogs were reported on 1, 2, 3, 10, 11, 15, 16, 24 and 30. The weather was ideal for most outdoor activity and was very favorable for the large amount of building under way. Fall farm work made good progress, with harvest completed and a good deal of fall plowing being done.—M.S.C.

TEMPERATURE

The mean temperature for the state was 51.2°, or 7.0° above the 1892-1947 average for October. The mean temperature for the eastern division was 52.2°; for the middle division, 51.0°; and for the western division, 50.3°. The highest mean temperature was 56.2° at McLeod, and the lowest, 47.0° at Belcourt, making a range in mean temperature of 9.2°. The absolute range was 82°, from 97° at Oakes on the 5th, to 15° at Belcourt on the 28th. The average daily excess in temperature for the state since January 1, 1947, is 0.9°.

PRECIPITATION

The average precipitation for the state was 1.31 inches, or 0.30 inch more than the 1892-1947 average for October. In the eastern division the average amount was 1.72 inches; in the middle division, 1.61 inches; and in the western division, 0.59 inch. The greatest monthly amount reported was 4.69 inches at Selfridge; the least was 0.17 inch at Crosby. The greatest amount recorded in any 24 consecutive hours was 2.00 inches at Fort Yates on the 11th. The accumulated excess in precipitation for the state since January 1, 1947, is 0.69 inch.

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PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.41	25	29.39	16	10.2	37	se.	8	78	85	54	57	57	398
Devils Lake....	30.38	7	29.43	17	8.7	28	nw.	11	79	81	58	60	52	430
Fargo.....	30.37	25	29.49	21	12.2	33	n.	22	79	87	64	66	53	368
Williston.....	30.40	7	29.28	17	7.0	29	se.	8	70	80	54	51	62	445

† And other dates.

COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	47.2	95	7	0.25	1.20	0.30	0.56	T.	3	15	8	8	
1893...	40.6	79	0	1.17	1.08	0.89	1.05	0.9	5	11	11	9	
1894...	43.0	77	16	2.28	1.76	0.94	1.66	0.0	6	14	8	7	
1895...	40.5	85	-12	0.31	0.15	0.27	0.24	0.0	2	16	8	9	
1896...	40.2	83	5	1.25	0.43	0.40	0.69	0.0	3	14	8	9	
1897...	45.9	93	6	1.01	0.75	0.56	0.77	0.8	4	13	9	9	
1898...	38.8	84	8	2.60	2.42	1.67	2.23	4.7	6	8	8	15	
1899...	42.1	86	7	1.16	1.21	1.15	1.17	1.3	5	11	8	12	
1900...	48.2	87	14	2.34	1.30	0.98	1.54	T.	6	15	4	12	
1901...	47.5	88	11	2.96	1.22	0.65	1.61	T.	5	17	7	7	
1902...	43.7	87	10	1.70	1.20	0.95	1.28	0.7	4	16	6	9	
1903...	47.0	81	11	1.42	0.80	0.60	0.94	0.2	3	19	5	7	
1904...	46.6	87	10	1.55	0.60	0.46	0.90	T.	5	12	7	12	
1905...	40.3	93	0	0.59	0.22	0.28	0.36	1.2	5	8	12	11	
1906...	45.0	89	0	0.75	0.45	0.27	0.49	1.4	4	14	9	8	
1907...	44.4	88	4	1.02	0.66	0.16	0.61	0.2	3	21	5	5	
1908...	43.0	86	8	1.46	1.36	2.07	1.63	0.7	6	11	7	13	
1909...	43.1	97	0	0.88	0.63	0.45	0.65	0.9	3	14	8	9	
1910...	48.2	95	0	0.49	0.66	0.38	0.51	0.1	3	16	8	7	
1911...	42.5	86	-10	1.25	1.27	1.20	1.24	0.5	6	11	8	12	
1912...	39.3	90	0	0.68	1.09	1.44	1.07	3.5	4	16	6	9	
1913...	39.3	90	-2	2.40	1.34	1.03	1.59	0.7	4	12	9	10	
1914...	50.0	97	0	1.20	0.93	0.65	0.93	T.	4	16	8	7	
1915...	46.6	87	-2	1.22	0.91	1.14	1.09	0.2	4	17	8	11	
1916...	40.0	85	-2	0.49	0.88	0.73	0.70	2.0	4	12	8	11	
1917...	34.7	82	-4	0.87	0.76	0.71	0.78	6.4	5	8	11	12	
1918...	46.2	90	-4	0.80	0.45	0.35	0.53	0.8	4	14	8	9	
1919...	33.5	84	-18	0.93	1.14	1.35	1.14	9.3	6	11	9	11	
1920...	49.3	95	6	0.53	0.28	0.33	0.55	0.1	3	16	8	7	
1921...	47.3	88	16	0.80	1.09	0.10	0.66	T.	4	16	8	7	
1922...	45.7	98	8	0.37	0.65	0.73	0.58	2.3	3	15	7	9	
1923...	44.0	84	-8	0.56	1.02	1.08	0.89	0.5	4	14	7	10	
1924...	50.3	86	19	2.31	2.14	2.82	2.42	0.3	7	17	5	9	
1925...	33.3	66	-16	0.83	0.64	0.96	0.81	3.7	6	8	10	14	
1926...	42.6	85	4	2.54	0.86	0.68	1.36	1.0	6	10	10	11	
1927...	47.0	88	12	1.53	1.49	0.96	1.33	1.0	5	14	8	9	
1928...	43.5	85	3	0.69	0.18	0.51	0.46	0.6	2	15	8	8	
1929...	46.8	88	10	2.87	1.63	1.05	1.85	5.1	6	17	6	9	
1930...	40.8	86	0	2.04	1.90	1.48	1.81	0.3	7	10	9	12	
1931...	47.7	90	10	2.63	0.93	0.60	1.39	0.2	6	15	6	10	
1932...	38.3	90	-3	2.33	2.41	2.06	2.27	9.1	8	9	7	15	
1933...	41.5	88	5	0.39	0.48	0.74	0.54	1.7	4	14	8	9	
1934...	49.0	94	5	2.11	0.83	0.08	1.01	0.1	3	14	8	9	
1935...	43.5	86	-10	0.29	0.08	0.12	0.16	0.7	2	15	9	7	
1936...	42.3	90	-5	0.23	0.16	0.24	0.21	1.1	3	14	9	8	
1937...	43.9	94	1	0.40	0.92	1.08	0.80	0.2	4	12	9	10	
1938...	50.9	95	4	0.27	0.44	0.95	0.55	1.1	4	16	7	8	
1939...	41.3	84	-6	1.17	0.64	0.44	0.75	1.2	7	8	10	13	
1940...	50.7	89	18	2.16	1.26	1.26	1.56	T.	6	14	8	9	
1941...	44.5	81	0	1.78	1.24	0.94	1.32	2.0	5	13	9	9	
1942...	46.5	90	-3	0.55	0.41	0.42	0.46	1.8	4	14	8	9	
1943...	48.2	89	10	0.86	0.64	0.78	0.76	2.8	3	18	6	7	
1944...	48.7	84	11	0.25	0.08	0.02	0.12	T.	1	21	8	2	
1945...	45.1	89	6	0.28	0.36	0.48	0.37	T.	3	15	9	7	
1946...	40.1	91	2	2.08	2.26	2.36	2.23	8.5	8	10	8	13	
1947...	51.2	97	15	1.72	1.61	0.59	1.31	0.9	7	14	9	8	
Period	44.2	93	-13	1.24	0.96	0.63	1.01	1.5	5	14	8	9	

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Climatological Data for October 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days					Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Arvilla, 1 1/2 mi. N	Grand Forks	960	4	51.4		86	5	19	28	1.88		0.83	12	0	9	17	7	7	se.	Albert Thoren.
Carrington	Foster	1,579	50	51.8	+8.1	85	5	23	29	2.18	+1.15	1.60	12	0	5	11	4	16		Soo Line Agent.
Casselton	Cass	934	52																	Ashton Lockhart
Cavalier	Pembina	894	40	48.6	+5.6	82	5	26	28	1.54	+0.25	0.90	11	0	10	14	9	8	se.	City Light & Power Co.
Colgate	Steele	1,180	14							1.07	-0.04	0.47	24	0	4	7	15	9	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	51	52.0	+7.3	85	5	23	28	2.83	+1.75	1.55	12	0	5	15	4	12	sw.	R. J. Lockner
Courtenay	Stutsman	1,523	17							2.14	+0.99	1.32	11-12	0	8	9	15	7	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	51.0	+8.6	81	5	28	28	1.64	+0.39	1.14	11-12	0.8	9	9	12	10	s.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	47	53.0	+7.4	90	5	23	28	1.59	+0.57	0.62	16	0	9	5	14	12	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	48.4	+5.9	82	5	24	28	1.98	+1.00	1.34	11-12	0	6	17	7	7	e.	Mike Davis.
Ellendale	Dickey	1,457	49	53.6	+7.7	84	4	25	28	1.44	+0.38	0.81	23	0	7	15	8	5	se.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	53.2	+8.7	89	5	26	28	1.13	-0.56	0.36	23-24	0	8	9	9	13	s.	U. S. Weather Bureau.
Foran	Sargent	1,249	56	54.9	+8.9	92	5	27	26	1.26	-0.09	0.37	23	0	7	16	7	8	sw.	Art Waterman.
Fullerton	Dickey	1,439	50	54.2	+8.9	90	5	25	28	1.11	-0.22	0.59	23	0	8	13	10	8	ne.	F. O. Alin.
Gackle	Logan	1,951	17	52.8	+7.4	83	21	23	28	3.12	+2.16	1.57	12	0	5	14	10	7	sw.	Tony Martin.
Grafton	Walsh	827	56	52.4	+8.6	81	5	25	28	2.01	+0.87	1.04	11-12	0	6	11	11	9	se.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	51.6	+7.9	86	5	26	28	1.05	-0.31	0.45	11-12	0	10	9	10	12	se.	University of N. Dak.
Grand Forks Airt., 2 1/2 mi. W	Grand Forks	834	7	51.2		86	5	24	28	1.02		0.53	11-12	0	8	14	3	14	se.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	54.2	+7.6	91	5	27	28	1.12	-0.25	0.26	10	0	7	9	9	13	se.	Soo Line Agent.
Hannah	Cavalier	1,568	54	48.4	+7.6	77	4	25	23	1.05	-0.02	0.22	8-9	0	8	9	16	6	nw.	A. E. Prior.
Hillsboro	Trails	901	42	53.4	+8.2	89	4	28	28	1.51	+0.17	0.48	23	0	8	7	13	11	se.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	53.4	+8.7	84	5	24	28	2.20	+0.91	1.19	11	0	7	14	7	10	s.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	7	51.8		83	5	25	28	2.50		1.51	11-12	0	11	10	9	12	s.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	51.6		81	5	21	28	3.18		1.69	11	0	8	11	8	12	se.	U. S. Wildlife Refuge.
LaMoure	LaMoure		1	54.2		92	5	23	28	0.92		0.63	23	T.	10	13	11	7	se.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	49.4	+8.5	80	5	25	23	2.01	+0.98	1.04	11-12	0	8	15	7	9	sw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	55	52.2	+8.1	84	5	26	28	1.69	+0.25	1.21	11-12	0	6	3	15	13	se.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	55.4	+10.7	89	5	22	28	1.48	+0.24	0.67	15	0	9	13	8	10	sw.	Robert M. Jodsaas.
Mayville	Trails	975	52	53.4	+7.4	86	5	28	28	0.99	-0.27	0.37	11-12	0	7	9	15	7	w.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,599	25	50.8	+7.5	85	5	23	28	2.83	+1.78	1.70	11-12	0	10	12	9	10	se.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	36	56.2	+9.7	92	5	25	28	1.25	-0.13	0.50	10	0	9	17	6	8	se.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	.....	48.6		77	5	27	23	1.00		0.34	11-12	0.5	10	11	9	11	w.	Harold Feldner
Oakes	Dickey	1,318	19	54.2	+8.2	97	5	25	28	1.47	+0.16	0.48	23	0	8	17	8	6	s.	C. M. Hagen.
Park River	Walsh	998	44	51.8	+8.1	83	5	26	28	1.99	+0.51	1.54	11	0	3	19	6	6	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	74	49.4	+7.8	81	5	24	8	2.22	+1.02	1.44	11-12	0	9	10	7	14	se.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	50.4		81	5	27	23	2.23	+1.06	1.26	11	0	6	21	8	2	se.	T. C. Overland.
Sharon	Steele	1,516	24	51.4	+7.8	85	5	28	23	2.22	+0.93	1.45	11-12	0	8	16	5	10	se.	Hugh Lyon.
Valley City	Barnes	1,229	43	53.6	+8.5	83	5	23	28	2.43	+1.11	1.12	30	0	7	17	6	8	sw.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	55.7	+8.7	92	5	25	28	1.40	-0.04	0.16	23-24	0	10	15	5	11	se.	State School of Science.
Average for Eastern Division				52.2	+7.9	97	5	19	28	1.72	+0.48	1.70	11-12	T.	8	12	9	10	Se.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52	52.1	+7.7	88	5	23	28	1.32	+0.26	0.33	23	0	8	15	4	12	se.	Eddie H. Glur.
Belcourt	Rolette	1,900	3	47.0		77	5	15	28	0.66		0.23	8-9	2.2	7	12	15	4	w.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	50.2	+6.4	81	5	23	28	0.99	0.00	0.31	8	2.5	5	20	1	10	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	53.3	+8.1	87	5	27	28	1.93	+1.02	0.92	11-12	2.0	7	11	6	14	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	8	52.4	+8.8	90	5	25	28	2.34	+1.40	1.24	11	2.5	7	11	6	14	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	50.6	+9.2	80	19	22	27	0.36	-0.61	0.14	30-31	0.8	8	15	8	8	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	51.7	+6.9	80	5	26	28	0.90	-0.70	0.35	30-31	2.0	6	14	9	8	w.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	36	53.4	+8.9	86	5	28	27	2.16	+1.25	0.97	11	1.0	9	16	6	9	se.	J. W. Evans.
Center	Oliver	2,100	10	50.4		93	5	22	28	1.90		0.70	30	1.0	6	9	16	6	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	50.6	+7.5	82	5	25	28	1.25	+0.21	0.34	8	1.5	6	17	10	4	se.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	52	48.8	+7.2	78	5	18	28	0.44	-0.42	0.28	8-9	0.8	4	13	8	10	w.	State Tuberculosis San.
Eckman	Bottineau	1,500	42	48.2	+6.0	81	19	21	23	0.92	+0.08	0.50	30-31	1.0	6	15	10	6	se.	E. R. Sherman.
Fessenden	Wells	1,610	36	51.2	+7.9	84	5	26	26	2.46	+1.40	0.78	11	2.3	6	12	10	9	w.	John V. Zuber.
Fort Yates	Sioux	1,670	48	53.5	+6.8	91	5	23	28	4.45	+3.46	2.00	11	T.	5	20	3	8	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	27	51.6	+8.7	82	3	22	29	0.35	-0.53	0.09	30	0.8	5	13	11	7	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	51.2	+8.0	82	19	28	27	0.93	+0.07	0.40	30-31	2.0	6	14	5	12	n.	Mae H. Vorachek.
Granville	McHenry	1,504	41	51.0	+7.4	84	19	22	28	1.05	+0.21	0.77	31	T.	6	19	6	6	nw.	Fred Roble.
Hansboro	Towner	1,597	40	48.2	+6.9	80	5	22	28	0.52	-0.52	0.24	8-9	2.0	4	10	11	10	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45							1.58	+0.51	0.64	11-12	0.5	10	15	8	8	se.	H. J. Reynolds.
Leeds	Benson	1,515	7	50.2		85	5	21	28	1.76		0.51	11	0	8	13	10	8	se.	John Dulmage.
Linton	Emmons	1,711	31																	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	33	51.2	+7.7	82	5	25	28	1.82	+0.84	0.57	11	0	9	10	13	8	nw.	Benson Cy. A. & T.

Climatological Data for October 1947-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Dickinson Airpt., 5 1/2 mi. S.	Stark	2,587	7	50.5	.....	83	19	28	27	0.58	.....	0.22	15	1.6	8	12	6	13	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	49	50.2	+8.1	84	19	24	28	0.55	-0.28	0.20	23	2.0	5	14	8	9	nw.	O. T. Evenson.
Elbowoods	McLean	2,082	55	49.6	+4.8	83	19	23	27	0.27	-0.53	0.15	25	0.6	4	18	8	5	nw.	H. W. Case.
Epping	Williams	2,224	39	50.0	+7.9	82	19	22	27	0.40	-0.37	0.13	31	1.3	5	9	16	6	se.	T. Beachler.
Fairfield, 9 1/2 miles N.	Billings	2,650	19	.....	.....	.....	.....	.....	.....	0.40	-0.44	0.20	23	2.0	3	14	9	8	se.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	7	51.2	+6.7	82	4	25	27	4.63	-0.27	0.38	11	1.5	4	20	7	4	se.	Chester K. Puda.
Grenora	Williams	2,114	39	50.8	+8.7	81	19	23	27	0.19	-0.60	0.17	23	1.0	2	21	4	6	se.	L. D. Nielson.
Halliday	Dunn	2,073	6	.....	.....	.....	.....	.....	.....	0.55	.....	0.26	23	0.5	5	21	4	6	nw.	John Kisse.
Hettinger	Adams	2,675	41	49.8	+3.7	83	5	25	27	1.40	+0.69	0.48	11-12	0	11	18	7	6	ne.	Edgar Martin.
Kenmare	Ward	1,799	16	52.8	+9.3	82	19	27	27	0.19	-0.77	0.12	8	T.	2	12	9	10	se.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	50.8	+4.8	84	4	22	27	0.77	-0.02	0.43	10	1.0	5	18	5	8	nw.	S. P. Crane.
Medora, 1 1/2 mi. W.	Billings	2,271	33	.....	.....	84	.....	.....	.....	0.61	-0.17	0.26	23	2.0	4	24	2	5	w.	Harry Roberts.
Mott	Hettinger	2,424	41	51.0	+6.6	84	5	28	27	1.37	+0.54	0.66	11	T.	7	16	10	5	se.	Northern Pacific Agent.
New England	Hettinger	2,621	56	50.0	+5.9	85	4	25	28	0.46	-0.33	0.18	15	0.7	8	15	7	9	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn	.....	6	50.4	.....	83	19	27	27	0.59	.....	0.26	24	1.0	6	20	5	6	sw.	Peter F. Fieck.
Parshall	Mountrail	1,929	33	49.6	+5.2	84	19	26	27	0.55	-0.20	0.30	23	3.0	6	11	19	1	nw.	C. E. Shubert.
Portal	Burke	1,954	34	48.4	+6.9	80	19	21	27	0.32	-0.52	0.17	8	1.0	3	17	9	5	se.	U. S. Customs Service.
Powers Lake	Burke	2,205	43	.....	.....	.....	.....	.....	.....	0.35	-0.70	0.25	8	1.5	2	15	11	5	se.	E. J. Lewis.
Richardton, 1 1/2 miles N.	Stark	2,467	32	52.4	+7.8	85	19	29	28	0.83	+0.04	0.36	23	3.0	8	18	4	9	nw.	Assumption Abbey.
Ryder	Ward	2,108	19	.....	.....	.....	.....	.....	.....	0.33	-0.47	0.17	23	1.7	3	16	4	11	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	49.0	+4.8	85	19	25	28	0.55	-0.22	0.25	23	2.0	5	19	3	9	e.	H. J. Bugge.
Stanley	Mountrail	2,258	10	47.8	.....	80	19	23	27	0.65	.....	0.31	8	1.0	5	15	5	11	sw.	Leroy Edwards.
Tagus	Mountrail	2,179	19	.....	.....	.....	.....	.....	.....	0.43	-0.35	0.12	8	1.4	6	14	9	8	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	19	.....	.....	.....	.....	.....	.....	0.65	-0.16	0.40	23	1.5	2	21	7	3	sw.	L. A. Simon.
Trotters	Golden Valley	.....	22	.....	.....	.....	.....	.....	.....	0.47	-0.33	0.26	8	2.0	3	9	21	1	ne.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	50.2	.....	79	5	24	27	0.25	.....	0.10	23	1.0	4	17	4	10	w.	H. Glenn Sims.
Watford City	McKenzie	2,084	35	51.6	+7.4	82	19	25	27	0.78	-0.09	0.41	23	3.0	5	20	4	7	sw.	J. C. Zeller.
Willdore	Williams	2,258	18	.....	.....	.....	.....	.....	.....	0.38	-0.42	0.20	24	1.1	2	17	7	7	sw.	Jonathan Winkler.
Williston	Williams	1,878	69	50.7	+7.3	82	19	26	27	0.55	-0.31	0.27	23	2.5	5	11	7	13	se.	U. S. Weather Bureau.
Average for Western Division				50.3	+6.8	86	5	21	27	0.59	-0.24	0.76	11	1.4	5	16	8	7	nw.	
Average for the State				51.2	+7.0	87	5	15	28	1.31	+0.30	2.00	11	0.9	7	14	9	8	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for October 1947

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum...	52	71	70	82	88	64	63	58	70	79	69	62	75	74	74	75	68	74	81	80	88	50	39	46	49	58	57	57	63	50	44	65.5	
	Minimum...	38	38	44	49	49	47	37	31	33	47	50	41	42	42	44	50	52	36	37	42	39	37	32	29	30	29	33	23	33	42	38.7		
Bismarck Airport	Maximum...	56	73	72	82	90	62	62	59	67	83	69	65	77	69	73	77	68	75	85	73	82	47	38	42	45	59	58	60	68	50	54	65.8	
	Minimum...	42	46	49	49	50	42	36	35	42	38	46	42	37	41	45	52	40	32	37	39	38	38	32	30	31	28	30	25	40	42	32	38.9	
Bottineau	Maximum...	58	69	71	77	74	73	58	58	66	72	73	64	76	76	69	74	73	70	80	68	70	71	46	37	42	58	57	58	62	59	54	64.9	
	Minimum...	38	44	45	39	39	25	30	28	31	37	51	43	33	39	44	48	38	35	38	40	45	35	27	29	32	28	22	27	35	32	44	36.2	
Carson	Maximum...	60	80	70	82	86	62	65	62	72	83	70	65	77	73	70	77	66	74	85	77	86	56	40	40	40	58	60	60	68	60	56	67.1	
	Minimum...	38	41	53	51	51	42	29	40	39	44	45	33	37	42	44	44	47	36	46	46	44	39	30	30	32	30	28	33	39	40	33	39.7	
Crosby/	Maximum...	60	75	71	72	72	52	58	63	66	72	58	68	78	68	75	80	67	67	80	63	56	57	35	36	37	61	56	63	60	51	59	62.5	
	Minimum...	37	36	38	45	41	28	28	30	38	36	39	32	35	36	37	39	38	29	41	36	34	33	24	27	29	28	23	22	30	32	27	33.2	
Devils Lake	Maximum...	55	61	68	79	82	61	58	57	68	79	67	59	74	64	68	71	67	72	75	66	73	46	38	40	45	57	56	58	62	50	46	62.0	
	Minimum...	41	47	46	44	44	38	39	33	44	40	47	46	45	44	43	55	45	39	39	40	42	33	29	32	36	31	32	28	36	41	43	40.1	
Dickinson Airport	Maximum...	47	77	70	80	81	56	60	67	69	82	58	65	77	67	57	76	65	72	83	70	74	42	36	41	42	57	57	63	62	48	56	63.1	
	Minimum...	37	43	50	51	43	35	33	40	40	40	41	47	33	41	41	43	41	37	33	43	42	37	36	30	31	32	32	28	33	36	37	30	37.9
Dunn Center/	Maximum...	49	76	70	79	80	60	58	66	70	80	72	66	78	75	57	78	68	74	84	74	71	53	42	38	41	59	57	65	60	53	57	64.8	
	Minimum...	37	31	50	55	41	41	40	35	38	34	50	34	37	41	37	36	40	29	31	38	30	37	30	27	30	27	26	24	29	40	30	35.6	
Fargo Airport	Maximum...	56	54	66	82	89	62	61	64	71	75	67	61	75	69	69	76	74	75	78	78	87	54	44	45	47	54	56	58	59	55	48	64.8	
	Minimum...	42	47	43	42	45	46	38	33	52	54	59	43	40	48	48	58	45	35	36	42	44	37	35	35	30	29	32	26	34	45	45	41.5	
Fessenden	Maximum...	59	71	70	80	84	64	61	58	72	80	69	63	74	67	63	68	74	67	73	79	76	42	44	47	47	58	55	55	59	64	55	47	64.6
	Minimum...	39	44	51	46	46	39	36	30	45	40	36	42	40	45	39	48	35	39	37	40	35	39	29	30	29	26	30	26	32	35	42	37.7	
Fullerton	Maximum...	60	69	71	83	90	78	64	64	72	81	75	70	75	76	78	73	75	82	80	81	65	44	47	49	52	58	57	64	55	48	68.2		
	Minimum...	40	45	43	46	47	46	37	31	41	52	62	31	50	41	49	53	50	38	32	34	40	41	32	30	35	29	31	25	27	39	43	40.1	
Garrison	Maximum...	56	79	72	80	81	52	60	58	70	80	62	66	79	68	69	77	67	73	82	67	72	49	37	41	40	57	58	58	60	53	55	63.8	
	Minimum...	41	45	48	48	45	38	40	34	41	38	48	36	39	44	41	48	43	32	38	42	38	37	31	30	34	32	28	25	30	43	34	38.5	
Golva	Maximum...	63	75	70	82	74	55	61	71	69	79	67	63	76	69	66	74	67	72	82	73	66	46	41	45	44	61	59	66	71	55	59	65.2	
	Minimum...	33	42	54	58	46	40	32	39	41	37	43	41	43	41	42	36	45	32	44	37	32	31	31	31	31	32	28	25	28	35	33	29	37.7
Grafton	Maximum...	54	54	66	79	81	71	57	59	68	74	67	61	69	66	64	69	71	73	71	66	71	71	46	44	44	50	52	58	56	56	51	63.1	
	Minimum...	41	47	48	41	41	40	40	28	46	58	60	48	44	50	37	55	52	37	44	48	39	43	28	38	32	32	37	25	30	43	44	41.8	
Grand Forks Airport	Maximum...	57	54	66	81	86	63	55	62	71	75	69	57	71	64	65	73	72	75	73	71	79	50	41	46	60	55	58	58	60	52	48	63.8	
	Minimum...	42	47	45	41	42	40	34	31	47	39	52	44	42	42	38	58	43	35	39	43	44	35	30	31	28	29	33	24	31	44	44	39.3	
Jamestown Airport	Maximum...	61	69	71	81	83	64	63	61	69	81	68	61	75	70	73	75	70	73	80	70	80	50	39	43	50	58	57	58	52	47	43	65.1	
	Minimum...	41	46	44	44	44	44	34	31	43	43	50	40	37	43	45	54	39	33	34	40	33	37	32	31	35	28	29	25	31	41	43	38.4	
Kenmare/	Maximum...	57	76	74	77	80	54	65	59	70	69	59	66	77	71	75	77	61	70	82	65	67	50	34	43	43	41	61	65	60	50	60	64.1	
	Minimum...	39	42	45	51	43	37	36	35	38	39	41	37	46	41	43	43	45	41	40	41	39	33	34	32	31	33	32	27	27	31	30	33	41.6
Langdon	Maximum...	49	56	68	77	80	65	59	56	65	65	70	59	70	68	65	66	70	69	68	69	68	60	41	43	47	55	59	56	58	54	49	61.0	
	Minimum...	37	43	45	86	40	29	31	29	43	38	54	43	40	40	39	52	50	32	38	36	36	37	25	32	29	31	27	29	34	39	40	37.2	
Marmarth	Maximum...	66	76	71	84	79	69	65	72	69	68	83	68	75	71	63	74	64	73	83	82	72	58	39	48	45	61	60	65	68	60	58	67.7	
	Minimum...	35	36	48	45	35	35	29	35	35	45	45	31	31	34	40	34	35	27	34	32	38	35	28	31	32	29	22	23	30	30	35	34.4	
Minot Airport	Maximum...	54	78	71	79	79	52	58	58	67	78	69	65	78	67	62	78	67	70	82	80	66	46	37	38	41	58	58	60	62	51	52	63.1	
	Minimum...	42	46	51	50	42	37	39	32	44	36	47	40	47	46	42	46	45	41	42	40	34	34	28	30	33	33	28	32	35	39	36	39.3	
Mott	Maximum...	54	76	71	66	84	70	63	66	70	84	75	65	74	65	62	77	63	72	83	75	80	61	42	45	44	57	54	63	70	51	58	65.5	
	Minimum...	34	35	48	39	42	40	31	38	36	39	42	36	32	39	42	38	38	42	41	36	38	37	30	30	32	31	28	30	34	35	30	36.2	
Pembina Airport	Maximum...	53	53	66	78	81	60	56	58	65	73	66	57	67	64	64	68	72	72	66	66	71	48	46	44	49	56	57	56	58	52	49	61.1	
	Minimum...	40	47	44	35	39	34	30	24	42	39	51	44	41	40	41	56	40	34	38	43	40	34	29	35	29	32	28	25	34	44	43	37.7	
Sharon	Maximum...	54	62	65	79	85	70	60	60	72	78	72	60	72	65	62	71	68	72	70	66	77	60	40	48	53	55	61	58	56	51	47	63.1	
	Minimum...	37	43	45	40	45	39	35	31	46	44	55	43	40	43	42	53	51	33	32	47	39	37	28	34	29	30	32	28	32	41	40	39.9	
Steele	Maximum...	59	71	70	80	85	61	59	60	67	80	70	64	73	68	73	75	68	74	79	70	83	63	43	42	44	58	57	60	66	53	51	65.5	
	Minimum...	38	44	50	44	50	43	34	34	40	39	49	38	35	41	43	51	46	30	35	39	37	38	30	27	33	25	32	24	37	37	38.7		
Valley City	Maximum...	57	65	69	82	83	63	61	62	69	82	78	64	74	74	70	75	71	74	79	71	81	75	45	46	48	55	56	56	63	61	56	66.0	
	Minimum...	39	45	45	45	44	46	39	34	48	45	60	47	39	40	48	52	35	33	38	41	42	34	37	39	31	35	23	30	40	41	40	40.6	
Wahpeton	Maximum...	56	54	67	85																													

Daily Precipitation for October 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
<i>Eastern Division</i>																																		
Carrington ²	James		T.							.06	T.		1.60				.11							T.	.28							.13	2.18	
Casselton	Red.																								.43	.15						T.	.27	2.83
Cooperstown	Sheyenne																								.43	.15						T.	.27	2.83
Courtenay	James		.03	.06						.07			.49	.83			.02								.40								.24	2.14
Devils Lake ¹⁵	Devils Lake		T.	T.						.05	.03		1.07	.07			.15	.01							.24						.01	.01	1.64	
Edgeley	James		T.	.02									.03				.03	.62							.57	.03	.07	.01			T.	.21	1.59	
Edmore	Devils Lake		T.	T.						.10			1.34				.20								.23	.06					T.	T.	1.98	
Ellendale	James			.09						.21			.03				T.	T.						.02	.81	.03						.25	1.44	
Fargo ¹⁵	Red.		T.	.08						.06			.24	.05			.18								.35	.01						.16	1.13	
Forman	Sheyenne		T.	.11						.07	.17						.36								.37	.02						.16	1.26	
Fullerton	James		.02	.05						.16			.03				T.							.04	.59	.02						.20	1.11	
Gackle	do			.05									1.57				.85								.27	.25						.18	3.12	
Grafton	Red.		T.							.05			.56	1.04			.07								.06	.23						T.	2.01	
Grand Forks Airport ³	do		T.	.04						T.			.06	.49	.04		.01								.32	.01						.05	1.02	
Hankinson ²	do		.05		.09					T.			.26	T.	T.			.20							.19	.19						.14	1.12	
Hannah	Pembina									.22			.15	.07			.12	.10							.20						.05	.14	1.05	
Hillsboro	Red.		T.	.10						.12	T.		.21	.27			.14	.04							.48	T.						.15	1.51	
Janestown Airport ³	James		.01	.01	.03			T.	T.	.12	.02		1.30	.21			.12							T.	.53	T.	T.				.05	.10	2.50	
Langdon	Pembina									.35			.62	.42			.08								.11	.25						.07	2.01	
Larimore	Red.									.85	.36						.01								.30	.05						.12	1.69	
Lisbon	Sheyenne		.02	.06						.30	T.	.02	.02				.67	T.						.04	.31	.04	T.						.12	1.48
Mayville	Red.		T.							.02	.12	.25					.09								.14	.18						.19	0.99	
McIntery	James		T.	.07						.02	.04		.83	.87			.01	.14							.36	.03						.46	2.83	
McLeod	Sheyenne			.14						.05	.50	.10	.04				.06	.10						T.	.21	.05							1.25	
Oakes ²	James									.22			.03				T.	.18							.48	.39	.01	.02				.14	1.47	
Park River	Red.			T.						.04			1.54	T.			T.								.41	T.						T.	1.99	
Pembina Airport ³	do		T.	.03						.04	.07	.22	1.34	.20			T.							T.	.27	.01						T.	.04	2.22
Petersburg	do											1.26	.29				.26								.34	.05						.03	2.23	
Sharon	do			.07						.02			.65	.80			.15								.37	.08						.05	2.22	
Valley City	Sheyenne			.04			.01	T.	T.		.10	.12					T.	.20							.84							1.12	2.43	
Wahpeton	Red.		.06	.15						.03	.26	.09					.15							.03	.22	.24						.17	1.40	
<i>Middle Division</i>																																		
Ashley ³	Missouri			.03	.02						.10	T.	T.	.08				.30							.33		.15					.31	1.32	
Bisbee	Devils Lake							.10		.31			.15												.25							T.	.18	0.99
Bismarck Airport ¹⁵	Missouri		T.	.12						.10			1.24	T.				.09						T.	.22							.34	.23	2.34
Bottineau ²	Mouse			.02	.01				.01	T.	.05		.03				T.	T.							.07	.03						.14	0.36	
Butte	do									T.	.20		.06	.09			.20								.20							.05	.30	0.90
Carson	Heart												.85	.12			.45	.07						T.	.17	.03	.04				.19	.24	2.16	
Center	Missouri								.07				.58				.15								.25	.15						.70	.30	1.25
Drake ²	Mouse			.02						.34			.04	.30											.25	.15						.30	1.25	
Dunseith	do		T.	T.						.28			.04	.30											.08	T.						.03	0.44	
Eckman	do		.01						.04		.09		.15				.05								.08	T.						.50	0.92	
Fessenden	James								.42				.78	.75			.06								.23							T.	.22	2.46
Fort Yates	Missouri			T.									2.00				.20								.50							1.25	.50	4.45
Foxholm	Mouse									.08			T.	.08											.08	.02						T.	.09	0.35
Garrison ³	Missouri								.12		.14	T.					.02								.25	T.						.33	.07	0.93
Granville	Mouse									.16			.01				T.	.01							.05	T.						.77	1.05	
Hansboro	Devils Lake								.04	T.	.24	T.													.13							.11	0.52	
Linton	Missouri																																	
Maddock	Sheyenne			T.						.07	.35	.07	.57	.22			T.								.25	.03						.06	.20	1.82
Mandan ²	Missouri			.04						.13	T.	.04	.53				T.	.16							.22	.05	.04					.94	2.15	
Max ²	do									.10			.19												.18	.15						.81	1.28	
McClusky	do									.33			.01	.52			.05	.01							.18	.03						.35	1.48	
Minot Airport ³	Mouse		T.	T.			.06			.07		.01	.01				.01								.06	T.	T.					.55	.12	0.89
Mohall	do			.02						T.	.05														.17	.02						T.	.10	0.36
Napoleon	Missouri		.01		.07		.01			.09	.11		.48	1.48			.05								.42		.02					.04	.63	3.41
New Salem	Heart									T.	T.		.35	.14			.09								.22	.02	T.					.10	1.45	
Pettibone	James			.07						.04			.50	.90											.31	.02						.28	2.12	
Rolla	Devils Lake									.05	.16		.01				T.	.01							.19							.08	.09	0.60
Rugby	Mouse			T.						.07			.19				T.	.05							.11	T.						.06	.12	0.65
Selfridge	Missouri			.03			T.			.35			1.48				.55								.30							1.98		4.69
Steele	do		.02	.15						.04	.21	T.	.80	1.64			.09	.01							.38	.02	.03	.03				.05	.33	3.80
Towner	Mouse									.08	.14		T.												.18	T.						.30	.48	0.40
Turtle Lake	Missouri		T.							.07			.15	.05			T.								.22	T.						.80	.48	1.27
Uttle	do			.08						.05			.35	1.50												.10	.64					.10	.64	3.01
Underwood	do												.13	.40											.33	.03						.10	.21	1.20
Velva	Mouse</																																	

1.05
VT
Nat Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVI BISMARCK, N. D., NOVEMBER 1947 No. 11

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GENERAL SUMMARY

The outstanding feature of the month's weather was the heavy snowfall. It was the third heaviest snow in any November and the heaviest since 1919. The average number of days with 0.01 inch or more precipitation was 9. This equalled the greatest number ever recorded in November and many stations in the eastern part of the state broke the long time records for number of days with precipitation. There was a snow cover over the entire state after the 11th ranging from a light cover over the northwest portion to heavy over the southeast portion. The greatest amount on the ground at any time during the month ranged from 4.8 inches at Williston and 7.8 inches at Bismarck on the 24th to 9.0 inches at Devils Lake and 15.4 inches at Fargo on the 28th. This heavy snowfall blocked some state roads and caused main highway travel to be heavy and slippery. City streets and walks were in a dangerous condition due to the snow and ice. No severe storms were reported, the highest wind velocity occurred at the Bismarck airport on the 24th when 52 miles per hour was recorded from the northwest. The temperature was a contrast from the above normal October to the below normal November. November averaged 4.1° below normal and 28.7° below October. Except for the extreme west portion, there were 2 to 3 times the normal number of days with zero or below. It was an extremely cloudy November with only 28% of possible sunshine compared to a normal of 46%. Fogs were reported on the 1, 2, 3, 4, 14, 17, 18, 19, 20, 21, 23, 25, 26, 29, 30; with sleet or glaze on the 14, 15, 18, 24, 25 and 30th. The Missouri River froze over on the 22nd. During the last half of the month much yard feeding of livestock was necessary.—M.S.C.

TEMPERATURE

The mean temperature for the state was 22.5°, or 4.1° below the 1892-1947 average for November. The mean temperature for the eastern division was 22.0°; for the middle division, 22.1°; and for the western division, 23.4°. The highest mean temperature was 26.4° at New Hradec, and the lowest, 18.2° at Belcourt, making a range in mean temperature of 8.2°. The absolute range was 82°, from 63° at Golva, Grenora and Williston on the 1st and Center on the 2d, to -19° at Eckman, Fargo Airport and Westhope on the 29th. The average daily excess in temperature for the state since January 1, 1947, is 0.5°.

PRECIPITATION

The average precipitation for the state was 1.05 inches, or 0.44 inch more than the 1892-1947 average for November. In the eastern division the average amount was 1.59 inches; in the middle division, 0.81 inch; and in the western division, 0.74 inch. The greatest monthly amount reported was 2.74 inches at Oakes; the least was 0.34 inch at the Dickinson Airport. The greatest amount recorded in any 24 consecutive hours was 1.05 inches at Fullerton on the 15th. The accumulated excess in precipitation for the state since January 1, 1947, is 1.13 inches. The average snowfall was 11.2 inches.

SILENT OBSERVERS

Mr. O. W. Roberts, in charge of the Bismarck Weather Bureau Office from 1906 to 1939, died December 5, 1947; age 78 years.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.56	29	29.59	23	11.4	52	nw.	24	88	90	77	79	28	1244
Devils Lake...	30.64	29	29.54	24	9.0	26	nw.	7	88	81	82	19	1306	
Fargo.....	30.60	29	29.48	7	12.0	34	nw.	7	90	91	81	87	26	1284
Williston.....	30.48	29	29.58	23	7.2	25	nw	24	90	91	76	80	41	1229

† And other dates.

COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	22.3	75	-26	0.80	0.95	0.61	0.79	7.4	4	8	9	13	
1893...	22.4	74	-27	0.72	0.75	0.24	0.57	4.6	3	9	10	11	
1894...	23.1	71	-25	0.44	0.54	0.43	0.47	2.6	4	10	8	12	
1895...	20.6	76	-25	1.18	1.01	1.08	1.09	8.2	5	8	9	13	
1896...	8.1	62	-32	2.06	2.47	2.17	2.23	21.7	9	8	7	15	
1897...	20.0	86	-28	0.27	0.33	0.36	0.32	2.8	3	12	9	9	
1898...	23.0	69	-30	0.42	0.30	0.30	0.34	3.1	3	13	8	9	
1899...	36.0	68	2	0.26	0.51	0.16	0.31	1.0	2	15	4	11	
1900...	20.4	64	-29	0.28	0.29	0.40	0.32	5.2	5	14	7	9	
1901...	26.8	70	-7	0.10	0.09	0.19	0.13	1.6	1	15	8	7	
1902...	29.6	69	-12	0.25	0.11	0.36	0.24	1.9	3	11	6	13	
1903...	25.3	78	-20	0.27	0.22	0.28	0.26	2.5	2	13	4	13	
1904...	35.7	80	-10	0.10	0.09	0.07	0.09	0.7	1	18	5	7	
1905...	31.6	88	-28	1.66	1.54	0.89	1.36	11.0	9	7	13	10	
1906...	23.8	88	-16	1.90	1.34	1.23	1.49	10.2	7	10	7	13	
1907...	30.2	85	-15	0.08	0.10	0.05	0.08	0.7	1	16	8	6	
1908...	31.1	75	-15	1.10	0.91	0.80	0.94	8.2	4	12	8	10	
1909...	29.4	88	-23	0.68	0.31	0.44	0.48	4.6	3	11	9	10	
1910...	23.9	68	-23	0.34	0.44	0.43	0.40	3.2	2	8	10	12	
1911...	16.7	58	-33	0.70	0.60	0.63	0.64	7.1	6	12	8	10	
1912...	31.8	70	1	0.09	0.06	0.06	0.07	0.5	1	14	9	7	
1913...	34.1	77	-2	0.21	0.23	0.21	0.22	1.6	2	15	8	7	
1914...	30.7	83	-30	0.45	0.31	0.23	0.33	2.6	2	13	10	7	
1915...	28.1	71	-10	0.81	0.83	1.21	0.95	3.7	4	10	10	10	
1916...	28.8	75	-18	0.10	0.25	0.46	0.27	1.7	2	16	8	6	
1917...	36.8	77	-7	0.20	0.13	0.05	0.13	1.4	1	16	6	8	
1918...	28.9	71	-18	1.31	1.09	0.49	0.96	5.3	4	13	6	11	
1919...	15.6	57	-36	1.88	0.96	0.62	1.15	11.8	5	11	8	11	
1920...	28.0	65	-14	0.55	0.33	0.14	0.34	2.1	3	10	9	11	
1921...	21.0	69	-30	0.52	0.71	0.83	0.69	6.3	5	7	8	15	
1922...	31.8	65	-8	2.97	2.26	1.50	2.24	6.3	6	7	7	16	
1923...	36.5	72	-5	0.58	0.45	0.39	0.47	0.6	3	13	8	9	
1924...	27.6	69	-15	0.19	0.17	0.17	0.18	1.9	2	11	9	10	
1925...	28.8	69	-17	0.42	0.17	0.13	0.24	1.3	2	14	8	8	
1926...	21.5	68	-23	0.72	0.54	0.60	0.62	6.2	5	6	7	17	
1927...	20.7	59	-24	0.71	0.72	0.65	0.69	7.1	6	7	8	15	
1928...	31.0	70	-11	1.08	0.28	0.09	0.48	0.2	1	15	8	7	
1929...	24.8	70	-21	0.57	0.46	0.56	0.53	5.2	5	9	8	13	
1930...	29.4	72	-21	1.56	0.62	0.43	0.87	6.2	5	13	7	10	
1931...	30.3	78	-10	0.98	0.40	0.27	0.55	5.0	3	13	7	10	
1932...	25.2	70	-17	0.70	0.38	0.45	0.51	4.6	4	10	10	10	
1933...	28.3	78	-15	0.81	0.58	0.56	0.65	6.6	5	9	8	13	
1934...	33.9	73	-1	0.51	0.22	0.10	0.28	1.0	3	13	7	10	
1935...	17.2	57	-25	0.70	0.79	0.69	0.73	8.1	6	8	8	14	
1936...	28.0	69	-28	0.37	0.33	0.31	0.34	4.0	4	13	8	9	
1937...	25.2	73	-25	0.51	0.40	0.33	0.41	3.5	4	10	7	13	
1938...	23.8	75	-21	0.63	0.94	1.04	0.87	7.9	6	8	10	12	
1939...	34.9	74	-4	0.04	0.02	0.02	0.03	T.	1	19	6	5	
1940...	22.0	59	-28	0.62	0.62	0.53	0.59	7.1	6	8	8	14	
1941...	30.5	69	-17	0.26	0.48	0.46	0.40	3.6	5	9	8	13	
1942...	28.0	73	-14	0.22	0.13	0.18	0.18	1.5	3	10	10	10	
1943...	28.7	63	-4	0.52	0.38	0.43	0.44	4.2	4	8	8	14	
1944...	27.1	70	-21	2.58	2.36	1.82	2.25	8.8	9	5	5	20	
1945...	22.3	75	-26	0.24	0.56	0.64	0.45	5.3	4	12	9	14	
1946...	25.3	68	-22	0.57	0.19	0.29	0.35	3.3	4	12	8	10	
1947...	22.5	63	-19	1.59	0.81	0.74	1.05	11.2	9	6	8	16	
Period	26.6	88	-38	0.72	0.59	0.51	0.61	4.7	4	11	8	11	

Climatological Data for November 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 40 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	4	21.2		51	11	-11	26	1.55	.....	0.59	15	16.8	12	7	6	17	nw.	Albert Thoren.
Carrington	Foster	1,579	50	21.9	-5.4	54	2	-8	23	0.92	+0.37	0.22	16	11.2	7	12	4	14	.....	Soo Line Agent.
Casselton	Cass	934	52																.....	Ashton Lockhart
Cavalier	Pembina	894	40	20.5	-4.2	52	2	-11	26	1.31	+0.57	0.27	14-15	10.3	11	9	7	14	nw.	City Light & Power Co.
Colgate	Steele	1,180	14							1.67	+1.00	0.60	15	14.3	6	1	12	17	nw.	O. M. Jensen.
Cooperstown	Griggs	1,423	51	21.4	-5.9	52	2	-15	29	1.70	+1.06	0.35	23	18.8	7	9	1	20	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	17							1.91	-1.34	0.75	15	17.0	10	3	7	20	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	21.5	-3.0	54	2	-10	29	0.97	+0.25	0.44	14-15	10.5	17	3	7	20	w.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	47	23.6	-5.7	50	2	-8	29	1.72	+1.20	0.62	14-15	15.5	14	1	9	20	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	19.6	-5.0	55	2	-18	29	0.63	+0.01	0.34	4-5	4.1	9	9	7	14	nw.	Mike Davis.
Ellendale	Dickey	1,457	49	23.3	-5.1	51	3	-11	23	2.02	+1.46	0.48	15	18.3	13	4	9	17	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	22.2	-4.9	51	3	-19	29	2.01	+1.11	0.49	14-15	19.0	16	3	4	23	w.	U. S. Weather Bureau.
Forman	Sargent	1,249	56	23.6	-5.0	52	3	-12	29	2.52	+1.95	0.72	15	16.5	8	11	4	15	sw.	Art Waterman.
Fullerton	Dickey	1,439	50	24.6	-4.4	51	2	-9	29	2.60	+1.89	1.05	15	26.1	11	3	5	22	nw.	F. O. Alin.
Gackle	Logan	1,951	17																.....	Tony Martin.
Grafton	Walsh	827	56	21.8	-3.2	52	2	-14	26	1.41	+0.72	0.35	15	19.5	10	9	9	12	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	57	21.0	-4.8	51	2	-16	29	2.08	+1.29	0.56	14-15	21.0	14	3	3	24	nw.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	7	20.0						1.35	.....	0.44	14-15	14.3	16	3	3	24	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	23.5	-5.4	51	3	-9	29	2.09	+1.44	0.54	21	21.0	10	6	5	19	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	54	19.6	-1.1	56	1	-15	24	1.05	+0.36	0.38	15	10.6	11	4	12	14	nw.	A. E. Prior.
Hillsboro	Trall	901	42	22.0	-5.3	50	2	-15	29	1.88	+1.12	0.94	15	21.7	11	3	8	19	ne.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	56	23.6	-3.7	52	2	-7	29	1.38	+0.71	0.48	14-15	11.5	7	2	10	18	nw.	N. Dak. State Hospital.
Jamestown Airt., 2 mi. NE	Stutsman	1,494	7	22.4						2.10	.....	0.62	14-15	17.6	14	2	10	18	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	1	22.6						1.41	.....	0.50	14-15	11.8	8	4	5	21	nw.	U. S. Wildlife Refuge.
LaMoure	LaMoure	1,616	1	24.0						1.84	.....	0.78	15	20.2	12	4	11	15	nw.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,134	52	20.0	-3.7	54	2	-10	24	0.82	+0.09	0.20	4-5	6.4	15	6	11	13	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	55	21.4	-4.4	51	1	-9	29	1.81	+0.49	0.50	15	14.7	7	2	10	18	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	44	25.0	-3.8	52	4	-14	29	1.52	+0.89	0.55	15	15.5	10	11	9	10	nw.	Robert M. Jodsaas.
Mayville	Trall	975	52	22.0	-5.8	50	2	-11	29	2.66	+1.95	0.61	14-15	29.0	16	5	10	15	sw.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	25	20.4	-6.2	51	2	-13	29	1.08	+0.54	0.28	20-21	9.9	9	3	5	22	nw.	C. E. Blasky.
McLeod, 3 miles E	Richland	1,075	36	23.0	-6.7	54	3	-13	29	1.21	+0.58	0.40	21	12.0	8	9	6	15	nw.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	19	23.6	-5.0	50	2	-11	29	2.74	+2.18	0.65	15	25.6	12	7	2	21	nw.	Harold Feldner
Oakes	Dickey	1,318	19	23.6	-5.0	50	2	-11	29	2.74	+2.18	0.65	15	25.6	12	7	2	21	nw.	C. M. Hagen.
Park River	Walsh	998	44	21.0	-6.0	54	2	-12	29	1.27	+0.64	0.50	15	12.2	7	6	9	15	nw.	Martin Severson.
Pembina Airport, 1 mile S	Pembina	795	74	20.9	-2.5	52	2	-10	29	0.95	+0.20	0.28	15	7.0	14	3	4	23	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	17	20.2						1.09	+0.45	0.45	15	10.1	9	9	10	11	nw.	T. C. Overland.
Sharou	Steele	1,516	24	20.2	-4.5	52	1	-14	29	1.76	+1.04	0.55	14-15	15.8	13	5	6	19	nw.	Hugh Lyon.
Valley City	Barnes	1,229	43	23.8	-4.2	51	2	-10	24	1.85	+1.17	0.47	14-15	23.4	10	3	10	17	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	56	24.2	-4.8	51	3	-14	29	1.80	+1.11	0.54	14-15	17.1	13	4	14	12	nw.	State School of Science.
Average for Eastern Division				22.0	-4.8	56	3	-19	29	1.69	+0.87	1.05	15	15.1	11	5	7	18	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	52							0.84	.....	0.38	14-15	10.1	9	3	10	17	nw.	Eddie H. Glur.
Belcourt	Rolette	1,960	3	18.2		54	2	-14	29	0.84	.....	0.38	14-15	10.1	9	3	10	17	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	22.5	-3.9	55	2	-13	29	1.28	+0.81	0.56	15	14.3	6	5	4	21	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	73	25.4	-3.1	58	2	-2	24	0.94	+0.46	0.40	15	13.4	10	2	8	20	nw.	U. S. Weather Bureau.
Bismarck Airt., 2 1/2 mi. SE	Burleigh	1,650	8	23.5	-3.0	58	2	-4	24	1.00	+0.43	0.51	14-15	14.4	12	2	8	20	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	56	20.8	-2.8	58	2	-12	23	0.55	+0.08	0.22	15	9.7	8	5	10	15	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	23	22.2	-4.3	57	2	-5	13	0.70	+0.10	0.50	15	8.6	4	7	6	17	nw.	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	36	24.9	-4.9	58	2	-3	24	0.41	-0.16	0.20	17	5.7	4	3	11	16	nw.	J. W. Evans.
Center	Oliver	2,100	10	24.4		63	2	-5	24	0.67	.....	0.26	14-15	9.2	7	3	6	21	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	21.2	-4.7	59	2	-13	29	0.82	+0.28	0.25	17	10.7	8	7	2	21	w.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	52	19.7	-4.4	57	2	-12	29	0.42	-0.08	0.12	15	5.8	8	10	2	18	se.	State Tuberculosis San
Eckman	Bottineau	1,500	42	20.6	-4.8	57	2	-19	29	0.95	+0.46	0.23	15-16	9.0	9	6	9	15	nw.	E. R. Sherman.
Fessenden	Wells	1,610	36	22.5	-4.1	55	2	-10	29	1.17	+0.57	0.26	17	13.5	8	9	13	8	n.	John V. Zuber.
Fort Yates	Sioux	1,670	48	25.6	-4.4	58	2	-8	18	0.60	+0.15	0.18	15	8.0	6	6	9	15	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	27	21.5	-4.1	57	2	-9	22	0.59	-0.09	0.14	15-16	11.5	7	4	1	25	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	71	22.0	-4.5	57	2	-8	29	1.01	+0.52	0.36	14-15	12.2	10	5	9	16	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	41	21.6	-4.8	59	2	-14	29	0.60	+0.06	0.20	15	7.3	10	9	6	15	nw.	Fred Roble.
Hansboro	Towner	1,597	40	20.2	-3.3	55	2	-13	13	0.75	+0.21	0.26	14-15	11.5	9	5	10	15	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	45							0.41	-0.17	0.11	26	6.0	6	3	14	13	nw.	H. J. Reynolds.
Leeds	Benson	1,515	7	19.8		55	1	-13	29	0.55	.....	0.38	15	7.9	3	2	26	2	nw.	John Dulmage.
Linton	Emmons	1,711	31																.....	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	33	22.0	-4.0	58	2	-13	29	0.79	+0.28	0.30	15	10.4	8	3	10	17	nw.	Benson Cy. A. & T. Sch.
Mandan, 1																				

Climatological Data for November 1947-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Dickinson Airt., 5½ mi. S.	Stark	2,587	7	24.2	.....	58	11	1	18	0.34	.....	0.10	3-4	3.5	9	4	7	19	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	49	24.4	-3.5	59	11	-1	18	0.47	+0.03	0.16	17	5.7	7	5	9	16	nw.	O. T. Evenson.
Elbowoods	McLean	2,082	55	22.6	-5.8	60	11	-11	22	0.61	+0.21	0.17	23	7.8	8	9	12	9	nw.	H. W. Case.
Epping	Williams	2,224	39	22.3	-4.0	62	1	-5	12	0.88	+0.45	0.28	25	9.9	7	9	13	8	nw.	T. Beachler.
Fairfield, 9½ miles N	Billings	2,650	19	.....	.....	.....	.....	.....	.....	0.58	+0.13	0.20	14-15	6.9	5	6	3	21	nw.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	7	25.2	-5.5	63	1	-2	21	0.57	+0.11	0.15	22-23	6.4	15	11	7	12	nw.	Chester K. Puda.
Grenora	Williams	2,114	39	22.8	-3.3	63	1	-2	18	1.16	+0.61	0.33	15	8.0	5	12	13	5	nw.	L. D. Nielson.
Halliday	Dunn	2,073	6	.....	.....	.....	.....	.....	.....	0.97	.....	0.21	17	13.5	10	8	9	13	nw.	John Kisse.
Hettinger	Adams	2,075	41	24.2	-7.2	60	2	-6	22	0.42	+0.02	0.24	20-21	4.9	4	6	18	6	nw.	Edgar Martin.
Kenmare	Ward	1,799	16	22.6	-3.7	58	2	-4	29	1.06	+0.52	0.22	15-16	14.4	12	6	5	19	w.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	26.4	-4.5	62	11	-1	13	0.60	+0.23	0.25	23	8.9	5	6	8	16	nw.	S. P. Grane.
Medora, 1½ mi. W	Billings	2,271	33	25.6	.....	62	11	-1	13	0.78	+0.30	0.43	3-4	4.4	6	12	6	12	w.	Harry Roberts.
Mott	Hettinger	2,424	41	25.6	-3.7	60	2	-7	18	0.68	+0.22	0.22	17	6.3	6	4	11	15	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	25.0	-4.4	60	11	-2	10	0.64	+0.19	0.24	3-4	5.8	11	8	14	8	nw.	Alfred Hasel.
New Hradec, 1 mile E.	Dunn	.....	6	26.4	.....	58	1	2	24	0.40	.....	0.15	17	3.6	8	8	4	18	nw.	Peter F. Fieck.
Parshall	Mountrail	1,929	33	21.2	-4.3	57	11	-12	29	0.72	+0.33	0.31	15	12.0	7	3	22	5	nw.	C. E. Shubert.
Portal	Burke	1,954	34	19.2	-5.8	59	1	-11	22	1.19	+0.67	0.25	15-16	14.1	10	7	7	16	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	43	20.6	-4.8	62	1	-12	29	0.88	+0.39	0.30	16	13.3	7	4	11	15	nw.	E. J. Lewis.
Richardton, 1½ miles N	Stark	2,467	32	.....	.....	.....	.....	.....	.....	0.64	+0.12	0.12	41	6.3	8	9	5	16	nw.	Assumption Abbey.
Ryder	Ward	2,108	19	.....	.....	.....	.....	.....	.....	1.06	+0.53	0.38	14-15	12.9	7	6	1	23	nw.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	21.7	-6.3	60	1	-8	22	0.66	+0.13	0.25	24	7.5	4	5	4	21	w.	H. J. Bugge.
Stanley	Mountrail	2,253	10	19.0	.....	56	1	-7	29	0.69	.....	0.20	14	10.0	8	4	3	23	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	19	.....	.....	.....	.....	.....	.....	1.05	+0.52	0.34	14-15	9.4	12	8	7	15	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	19	.....	.....	.....	.....	.....	.....	1.08	+0.62	0.35	13-14	13.5	5	11	2	17	nw.	L. A. Simon.
Trotters	Golden Valley	.....	22	.....	.....	.....	.....	.....	.....	0.48	+0.03	0.14	23	6.4	6	2	16	12	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	22.6	.....	59	1	-9	22	0.62	.....	0.16	14-15	8.3	6	7	6	17	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	35	24.8	-3.7	62	1	2	12	0.94	+0.45	0.16	31	10.0	9	5	13	12	nw.	J. C. Zeller.
Wildrose	Williams	2,258	18	.....	.....	.....	.....	.....	.....	1.36	+0.86	0.32	25	11.7	8	6	4	20	nw.	Jonathan Winkler.
Williston	Williams	1,878	69	24.0	-3.2	63	1	-1	18	0.76	+0.18	0.22	14-15	7.7	13	6	8	16	nw.	U. S. Weather Bureau.
Average for Western Division				23.4	-4.7	63	1	-12	29	0.74	+0.23	0.48	3-4	8.4	8	7	9	14	nw.	
Average for the State				22.5	-4.1	63	1	-19	29	1.05	+0.44	1.05	15	11.2	9	6	8	16	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
 † Trace, precipitation 0.005 inch or less.
 ‡ And other dates.
 § Best available used for stations not equipped with recorders.

Daily Temperatures for November 1947

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum																																	
	Minimum																																	
Bismarck Airport	Maximum	42	58	48	41	40	40	29	33	33	33	25	20	42	34	32	29	30	23	29	25	18	20	-20	37	36	39	35	29	26	43		33.0	
	Minimum	23	40	39	35	26	21	18	18	11	8	11	3	6	16	24	21	12	1	12	15	-2	0	-2	-4	8	23	20	0	-3	16		14.0	
Bottineau	Maximum	47	54	57	44	41	38	37	25	26	37	25	21	21	26	32	33	28	27	25	20	18	19	24	22	27	23	19	9	36		29.9		
	Minimum	27	35	41	35	26	17	12	14	8	5	10	-2	-11	13	20	23	17	20	20	13	12	-2	-12	-7	3	10	3	2	-10	5		11.1	
Carson	Maximum	54	58	48	40	36	39	30	33	30	34	28	17	45	40	28	26	28	22	27	25	19	20	29	38	38	42	37	33	35	49		34.3	
	Minimum	32	36	36	33	20	23	13	14	9	4	14	6	1	18	20	17	18	-2	17	12	9	7	3	-3	8	30	22	17	14	18		15.5	
Crosby/	Maximum	62	53	44	34	35	37	26	28	23	24	15	14	28	27	29	23	25	22	23	18	14	22	30	32	35	30	32	24	31	37		29.2	
	Minimum	25	26	27	30	25	20	16	13	13	3	4	-3	3	12	15	19	9	-6	0	1	2	-5	-5	-5	3	24	15	-5	-6	11		9.2	
Devils Lake	Maximum	46	54	46	46	43	36	27	29	27	30	24	13	21	30	33	29	30	28	28	26	20	14	13	24	19	21	16	18	24	39		28.5	
	Minimum	40	42	44	36	31	24	18	17	12	9	4	0	-1	6	27	24	24	25	14	15	12	-2	-4	4	7	6	7	-6	-10	19		14.5	
Dickinson Airport	Maximum	58	58	40	35	32	35	29	31	28	34	27	16	44	40	26	23	26	23	26	27	14	20	28	36	40	42	33	35	41	50		33.2	
	Minimum	29	34	30	27	22	18	15	8	6	6	12	2	5	17	13	18	6	1	13	13	6	4	1	5	22	30	27	18	20	29		15.2	
Dunn Center	Maximum	59	59	55	41	36	38	30	32	28	24	28	17	40	33	27	25	30	25	27	25	16	21	26	37	38	42	35	29	37	49		34.0	
	Minimum	21	33	34	32	21	19	15	14	8	6	14	7	0	13	20	18	20	-1	13	11	8	8	0	1	7	31	22	19	3	23		14.7	
Fargo Airport	Maximum	48	50	51	49	45	36	30	30	34	29	26	16	26	38	33	34	30	28	29	28	30	18	16	20	18	14	17	14	11	33		20.5	
	Minimum	44	47	46	40	31	30	26	20	13	11	15	-1	-2	11	30	25	25	21	25	22	17	-1	-6	-10	0	-3	-5	-14	-19	11		15.0	
Fessenden	Maximum	50	55	52	49	41	38	30	31	31	32	27	14	27	25	33	32	29	28	26	25	20	15	13	31	27	31	28	27	25	43		31.2	
	Minimum	37	38	43	38	28	24	16	18	13	11	9	-2	-5	12	21	23	21	17	16	13	12	-2	-5	-8	4	9	7	5	-10	11		13.8	
Fullerton	Maximum	48	51	50	45	45	37	32	33	34	30	24	22	37	35	24	26	33	31	31	27	24	17	16	32	26	37	36	30	19	30		32.8	
	Minimum	41	43	42	39	29	29	22	19	13	9	14	3	1	16	29	28	23	2	22	21	16	-3	-2	6	3	12	11	6	-9	12		16.3	
Garrison	Maximum	51	57	47	40	38	36	29	31	28	30	22	12	30	31	30	27	30	23	28	26	20	18	17	32	35	38	27	27	23	42		30.8	
	Minimum	28	37	40	35	25	19	15	14	13	14	3	-1	-1	18	25	19	9	9	20	9	3	-3	-2	6	21	13	1	-8	20		13.3		
Golva	Maximum	63	59	41	38	32	34	32	31	26	36	29	19	34	26	26	28	26	26	28	26	21	26	23	36	42	43	42	40	45	53		34.4	
	Minimum	25	32	35	25	21	17	15	12	9	6	9	0	3	6	9	15	0	11	16	11	-2	9	6	16	26	33	30	25	29	24		15.9	
Grafton	Maximum	49	52	50	48	48	40	35	29	29	28	28	22	18	31	32	31	30	32	31	26	25	26	10	11	18	14	15	13	7	35		28.8	
	Minimum	40	43	46	46	35	26	23	23	17	11	17	0	-6	10	28	25	22	26	23	15	18	6	-10	-9	3	-14	5	-8	-13	-8		14.7	
Grand Forks Airport	Maximum	46	51	49	49	43	37	29	30	30	28	25	15	22	33	32	30	31	30	32	24	24	17	12	13	16	12	13	13	10	28		27.5	
	Minimum	42	45	45	40	30	27	23	19	11	9	0	-1	-8	16	27	24	24	25	18	16	16	-7	-9	-9	-3	-10	-12	-14	-18	10		12.5	
Jamestown Airport	Maximum	45	51	48	46	44	36	29	33	34	32	25	13	31	34	32	32	29	27	27	24	18	17	11	29	24	35	23	22	36		30.5		
	Minimum	35	42	42	34	30	24	20	19	12	12	7	-1	-1	19	28	26	24	16	21	18	4	-5	-5	-6	7	10	5	-7	-11	10		14.3	
Kenmare/	Maximum	54	58	45	39	40	43	30	33	27	26	20	15	23	28	32	30	30	23	26	22	12	23	30	30	35	39	27	25	35	41		31.4	
	Minimum	31	35	39	38	24	23	18	14	15	6	6	0	-2	9	17	23	17	9	12	8	7	3	1	0	8	20	12	13	-4	8		13.7	
Langdon	Maximum	45	54	47	49	44	39	31	27	27	27	18	14	20	27	29	29	29	30	28	28	24	17	19	22	23	20	16	15	4	35		28.0	
	Minimum	37	39	41	40	30	22	15	17	11	8	8	-3	-7	8	25	21	20	18	19	8	13	2	-10	-3	-5	0	3	-10	8		12.1		
Marmarth	Maximum	62	62	52	42	35	44	32	34	30	38	25	3	45	39	30	23	25	27	28	25	22	20	31	39	44	44	38	43	47	51		36.6	
	Minimum	18	25	33	30	17	25	11	10	5	10	15	3	-1	10	20	20	3	1	15	15	8	5	14	4	33	28	33	21	32	21		16.2	
Minot Airport	Maximum	53	56	46	42	39	38	28	30	25	28	23	12	27	25	32	32	25	24	26	25	16	13	13	30	23	37	27	28	32	38		29.8	
	Minimum	31	39	41	34	27	21	17	16	19	7	1	0	0	11	25	22	16	15	21	12	1	3	-3	9	12	16	15	6	-5	24		14.4	
Mott	Maximum	58	60	58	49	40	37	35	36	32	34	29	21	48	42	32	30	28	22	28	24	21	22	28	36	40	42	39	36	38	51		30.6	
	Minimum	26	34	32	31	18	16	12	8	9	11	8	-4	17	16	14	12	-7	16	15	5	6	0	-1	15	31	27	17	16	23		14.7		
Pembina Airport	Maximum	47	52	48	48	44	38	28	27	26	27	25	15	19	32	32	28	30	30	31	22	23	19	9	11	14	10	12	10	9	30		26.5	
	Minimum	41	44	45	44	34	27	22	20	14	12	11	12	-4	20	28	20	20	23	14	10	18	-4	-6	-2	1	-6	2	0	-10	9		15.3	
Sharon	Maximum	52	51	46	48	43	32	29	30	33	29	23	12	19	28	32	30	30	27	30	26	26	22	10	22	19	15	15	15	8	32		27.8	
	Minimum	37	40	40	40	30	25	18	18	12	6	6	-7	-12	12	26	21	21	20	20	18	12	-2	-8	-10	-1	-5	4	-1	-14	8		12.5	
Steele	Maximum	43	57	47	46	46	38	26	32	33	31	26	13	40	30	32	33	30	26	26	20	18	18	33	27	37	30	27	22	38		31.7		
	Minimum	27	40	42	33	23	22	15	14	8	7	8	-2	6	13	27	24	19	9	13	12	7	-8	-2	-10	4	17	8	2	-12	16		12.7	
Valley City	Maximum	48	51	48	50	45	43	38	31	34	30	27	25	30	34	34	33	32	30	28	26	25	20	14	28	21	23	22	25	12	31		31.3	
	Minimum	38	43	41	42	34	29	20	21	16	11	18	3	3	17	31	25	16	17	23	21	15	-3	-3	-10	4	9	9	2	-9	7		16.3	
Wahpeton	Maximum	50	50	51	51	50	42	35	32	39	33	30	24	30	37	34	35	32	30	30	35	34	21	20	24	24	24	20	14	7	38		32.5	
	Minimum	45	46	46	46	35	29	26	24	14	8	16	6	2	11	30	27	16	11	22	27	19	-1	-2	-2	-7	-1	-3	2	-15	-14	-3		15.9
Williston	Maximum	63	53	43	38	35	37	30	31	27	33	22	16	36	31	25	22	24	21	25	22	14	20	27	39	38	41	35	20	37	43		3	

Daily Precipitation for November 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total			
Eastern Division																																				
Carrington ²	James	.13		T.	T.					T.					.14	T.					.13	.22	T.		.05		T.		.10	.15	T.					0.92
Casselton	Red.																																			0.72
Cooperstown	Sheyenne			T.	.32	.14			T.						.15										.35										1.70	
Courtney	James		.02	.15	.14				T.						.19										.19	.05	T.		.19						1.91	
Devils Lake ¹⁵	Devils Lake		T.	.01	.16				T.	T.	T.	.01	.02	.01	T.	.04	.41	.03	.10	.02	T.	.01	.03	T.	.01	.02	T.	.03	.01	.06					0.97	
Edgeley	James	.01	T.	T.	.26	.23			T.	T.	T.		.01	T.			.62	.07	.15	.01	T.	.13	.07	T.	.02	.05	T.	.07	.02						0.72	
Edmore	Devils Lake			T.	.22	.12			T.	T.	T.		.02	T.			.08	.06	.03	.02	T.	.05	T.	T.	.03			.09	.02						0.63	
Ellendale	James			T.	.30	.17			T.	T.	T.		T.				.48	.08	.21		.13	.14	.22	T.	.07	.06		.05	.09	.02					2.02	
Fargo ¹⁵	Red.	T.	T.	T.	.30	.09			T.	T.	T.	T.	T.	.14	T.		.26	.23	.01	.05	.05	.05	.19	.37	T.	.10	.03	T.	.05	.01	.08	T.	T.		2.01	
Forum	Sheyenne				.64	.07									T.	T.	T.	.72	T.	T.	.27	T.	.24	.34		T.	.09	T.	.15	T.					2.52	
Fullerton	James			T.	.53				T.				T.	T.		T.	1.05	.10	.14	T.	.05	.20	.32		.06	T.	T.	.04	.07	.04	T.				2.60	
Gackle	do																																			
Grafton	Red.					.16			T.						.10	T.					.10	T.	.01	.23	T.	T.	.04	T.	T.	.11	.11				1.47	
Grand Forks Airport ³	do	T.		T.	.25	.13			T.	T.			.07	T.		.08	.39	.02	.13	.04	.01	.05	.05	T.	.01	.04	T.	.02	.03	.03	T.	T.			1.35	
Hankinson ²	do	.04			.05	.20											.40	.48			.09		.20	.54			.05								2.09	
Hannah	Pembina	.10		.06	.12	T.											.38	.04	T.	.08	.05	T.					.02			.08	.05				1.05	
Hillsboro	Red.	.08			.20				T.	T.	T.		.08				.94	T.		.19			.15	T.		.05	.04		.03	.10	.02	T.			1.88	
Jamestown Airport ³	James	T.		.01	.50				T.	T.	T.		.01	T.		.10	.52	.02	.11	T.	.01	.19	.23	T.	.06	T.	.19	.13	.02	.04	.02				2.10	
Langdon	Pembina	.01		.04	.14	.06					.03		.04				.09	.05	.06	.07		.07	.07		.03		.07								0.82	
Larimore	Red.				.17								.16				.50	.11		.13			.18			.05	T.	T.	T.	T.	T.				1.31	
Lisbon	Sheyenne			T.	.29	.12	T.		T.				T.			.05	.55		.03	.06	.01	.19		.05	T.	T.	T.	T.	T.	T.					1.52	
Mayville	Red.			T.	.13	.02					T.		.45		.25		.61	.08	.04	.21	T.	.05	.52		.03	.07	.07	.03	.07	.03					2.66	
McHenry	James			T.	.16	.17			T.				.05				.21	T.	.07	T.	T.		.28		.06	.02		.06							1.08	
McLeod	Sheyenne				.10	.11			T.							T.	.38	.04	T.	.12	T.	T.	.40	.02	T.				.04						1.21	
Oakes ²	James	.01			.22	.43											.65	.43		.17		.18	.48	.02	.04	.05		.06							2.74	
Park River	Red.			T.	.35	T.			T.	T.			.10				.50	.05	.07				T.	.10	.10		T.	T.	T.						1.27	
Pembina Airport ³	do	T.		T.	.13	.17			T.	T.			.01	.06	T.	T.	.28	.04	.10	.02	.02	T.	.02	.01		.02	T.	T.	T.	.02	.05	T.	T.		0.95	
Petersburg	do			T.	.26	.04											.45	T.	.11	.03	T.		.03			.13		.01		.03					1.09	
Sharon	do			.03	.35	.08			T.		T.				.38	T.	T.					.06	T.			.05	.02		.02		.03				1.76	
Valley City	Sheyenne			T.	.29	.22							.01			T.	T.		.21			.20	.26		.08	T.		.10	T.	.01					1.85	
Wahpeton	Red.	.03			.28	.10			T.	T.			.01				.47	.03		.13			.14	.39			.01		.05	.02	.07				1.80	
Middle Division																																				
Ashley ³	Missouri																.56	.09	.11							.02									1.28	
Bisbee	Devils Lake			.04									.46				.49	.02	.09			.02	.03	.01	T.	.10	.09	.06	.01	T.					1.00	
Bismarck Airport ¹⁵	Missouri	.01		T.	T.				T.		T.	T.	T.			.07	.22	T.	.08		.05	T.	T.	T.	T.	.05	.05	T.	.13	.02	T.	T.	T.		0.55	
Bottineau ²	Mouse			T.	.01				T.				.10				.50	T.	T.	T.			T.	T.		.05	.05	T.							0.70	
Butte	do			T.	T.				T.								.22	T.	T.	T.			T.	T.		.05	.05	T.							0.41	
Carson	Heart			T.	T.						T.		.04				.02		.20	T.	T.	T.	.15	T.		.06	.03	T.	T.	.19	.06				0.67	
Center	Missouri			T.	T.						T.		.02			T.	.26	.05	T.		T.		T.	T.		.06	.03	T.	T.	.19	.06				0.82	
Drake ²	Mouse		.03										.08				.20	.05	.25							.05	.05		.11						0.82	
Dunseith	do			T.	T.				T.	T.			.03	T.			.12	.03	.06	.04						.05	.05		.06		.03				0.42	
Eckman	do			.11									.10				.08	.23	.02	.09						.11		.12	.09						0.95	
Fessenden	James			T.				.16					.19				.19		.26		.07		.11		.14		.05								1.17	
Fort Yates	Missouri			T.									.18	.08	.11		.18	.08	.11			.09				T.		.08	.06	T.					0.60	
Foxholm	Mouse			T.	T.						T.		.02				.12	.14	.11	T.						.12	.03		.05						0.59	
Garrison ³	Missouri			T.	T.						T.	.02	.04			.13	.29	.06	.16		T.	T.	T.		.10	.10	.07		.04						1.01	
Granville	Mouse			.03									.06				.20	.06	.09	.02				T.	.03	.03	.04	T.	.04						0.60	
Hansboro	Devils Lake			T.	.06								.08				.26	.14	.05	.03					.03	.02		.01	.10	T.					0.75	
Liutou	Missouri																.30	T.	.20				.06	T.		.07	T.	.04	.05						0.79	
Maddock	Sheyenne			.04					T.				.03				.41	.14	.10	.08	T.		.03	.02	T.	.10	.10		.02	.06	.01	.01				1.08
Mandan ²	Missouri			T.	T.				T.				T.	T.			.35	.19	.20	.18					.03			.05	.06	.06						1.24
Max ²	do			.05									.07				.32	.12	T.						.10			.11							0.76	
McClusky	do			.02					T.				.09				.32	.12	T.						.10			.11							0.70	
Minot Airport ³	Mouse			.04	T.				T.				.03	T.	T.		.06	.20	.08	.08	T.	T.	T.	T.		.09	.01	.05	.05	.01					1.34	
Mohall	do		.06	.04					T.				.05	T.	T.		.32	.26	.21	.04					.08		.17	.04							0.81	
Napoleon	Missouri		.02	.04					T.				.02				.20	T.	.20			.02	.04	.08	T.	.04	.03	.09	.02	.01	T.				0.64	
New Salem	Heart												T.				.10	.04	.12			.01	T.			.10	.10	.07	.06	.04					0.81	
Pettibone	James												.01	T.			.21	.03	.14					.36		.02	.12	.07	.13		.02				1.11	
Rolla	Devils Lake			.06									.11				.23	.10	.12	.03	T.			.02	.02	.03	.03	.04	.02	.05					0.84	
Rugby	Mouse	T.		T.	T.				T.				.20				.26	T.	.10	.15				T.	T.	T.	.07	.03							0.81	
Selfridge	Missouri			T.	T.								T.			.05	.10	.07	.10				.20	T.	T.	T.	.05	.03	.07						0.67	
Steele	do	.02		T.	T.								.06			.02	.42	.02	.32		.02	T.	.17		.03	T.	.02	.12	.02						1.24	
Towner	Mouse												.12				.44	T.	.09						.03	T.	.06	.05	.05						1.24	
Turtle Lake	Missouri			T.									.09				.41	.10	T.	T.					.09											

Except as otherwise indicated, amounts are for 24 hours ending late in the afternoon.

¹ Midnight to midnight.

² Measured in the morning: for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis. 12-30-47-1200]

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

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NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVI BISMARCK, N. D., DECEMBER 1947 No. 12

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GENERAL SUMMARY

Temperatures averaged above normal over the western part of the state and below normal over the eastern part. Precipitation varied considerably but was heavy over the northeastern portion with many roads snow blocked. Precipitation was light over the southwest portion. There were no severe storms but the blowing and drifting snow on the afternoon of the 14th, 24th and a few other dates made near blizzard conditions for several hours. Severely cold weather prevailed on the 31st, with 20° below zero general, and several stations in the north-central portion reported temperatures more than 30° below zero. The combined cloudy weather, with sunshine 10% below normal and cold last of the month called for above normal heating requirements. Fogs were numerous, occurring on the 1, 2, 4, 5, 6, 8, 11, 12, 13, 16, 22, 23, 24, 26, 27, 28, 29, and 30th. On December 31st ice on the Missouri River averaged 19.0 inches thick. In the Red River Valley the ice harvest was also delayed, due to slow freezing beneath the heavy snow cover. At the close of the month, Fargo still had a snow cover of 15.3 inches from a maximum coverage of 17.7 inches on December 2d and 3d.—M.S.C.

TEMPERATURE

The mean temperature for the state was 14.2°, or 0.8° above the 1892-1947 average for December. The mean temperature for the eastern division was 10.7°; for the middle division, 13.0°; and for the western division, 18.8°. The highest mean temperature was 23.8° at Golvea, and the lowest, 6.0° at Pembina, making a range in mean temperature of 17.8°. The absolute range was 90°, from 54° at Hettinger and Medora on the 26th, to -36° at Willow City on the 31st. The average daily excess in temperature for the state since January 1, 1947, is 0.5°.

PRECIPITATION

The average precipitation for the state was 0.42 inches, or 0.05 inch less than the 1892-1947 average for December. In the eastern division the average amount was 0.48 inch; in the middle division, 0.44 inch; and in the western division, 0.35 inch. The greatest monthly amount reported was 1.63 inches at Grafton; the least was 0.13 inch at Hettinger. The greatest amount recorded in any 24 consecutive hours was 0.46 inch at Grafton on the 14th. The accumulated excess in precipitation for the state since January 1, 1947, is 1.08 inches. The average snowfall was 5.5 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.49	25	29.34	14	8.4	45	n.	14	92	92	84	89	36	1571
Devils Lake...	30.59	3	29.35	14	7.8	26	n.	14	92	83	78	81	30	1726
Fargo	30.63	3	29.32	14	11.0	35	s.	19	91	90	84	89	34	1699
Williston.....	30.52	24	29.22	14	5.8	34	n.	14	91	91	79	84	44	1358

† And other dates.

COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	7.1	60	-39	0.44	0.49	0.78	0.57	7.7	4	13	8	10	
1893...	4.7	55	-36	0.71	0.83	1.02	0.85	8.4	6	11	9	11	
1894...	19.1	70	-32	0.38	0.17	0.32	0.29	1.6	2	18	7	6	
1895...	13.8	62	-32	0.24	0.29	0.39	0.31	2.6	3	12	9	10	
1896...	16.4	53	-35	0.50	0.46	0.13	0.36	2.6	3	13	9	9	
1897...	10.8	69	-35	0.24	0.21	0.21	0.22	2.2	3	12	8	11	
1898...	12.1	51	-38	0.24	0.24	0.24	0.24	2.1	3	14	9	8	
1899...	12.8	60	-26	0.31	0.31	0.34	0.32	3.3	3	13	7	11	
1900...	17.3	53	-29	0.35	0.29	0.29	0.31	3.0	4	13	8	10	
1901...	12.4	61	-43	0.72	0.74	0.75	0.74	7.2	5	10	7	14	
1902...	7.8	49	-35	0.50	0.30	0.72	0.51	4.2	4	14	7	10	
1903...	11.6	57	-33	0.63	0.74	0.93	0.77	7.2	6	11	7	13	
1904...	14.2	55	-43	0.60	0.62	0.73	0.65	6.2	5	7	8	16	
1905...	15.3	55	-34	0.21	0.16	0.12	0.16	1.6	4	16	2	13	
1906...	8.4	48	-40	1.09	0.91	1.27	1.09	10.7	6	11	7	13	
1907...	20.1	68	-26	0.36	0.23	0.31	0.30	3.1	3	15	7	9	
1908...	14.4	62	-37	0.53	0.26	0.28	0.36	3.7	3	13	10	8	
1909...	5.2	54	-42	1.88	1.10	0.86	1.28	12.1	7	9	8	14	
1910...	12.9	56	-34	0.45	0.42	0.42	0.43	4.6	4	12	8	11	
1911...	14.9	61	-33	0.45	0.26	0.34	0.35	4.5	4	10	8	13	
1912...	18.9	72	-28	0.62	0.55	0.13	0.43	4.0	4	14	8	9	
1913...	22.7	67	-21	0.05	0.12	0.01	0.06	0.3	1	18	6	7	
1914...	5.4	57	-42	0.58	0.40	0.42	0.47	5.7	4	12	9	10	
1915...	15.8	57	-27	0.56	0.56	0.44	0.52	5.4	5	11	8	11	
1916...	2.7	61	-50	1.39	1.34	0.81	1.18	13.9	5	15	8	8	
1917...	0.7	58	-44	0.51	0.64	0.61	0.59	7.4	5	9	9	14	
1918...	18.5	65	-41	0.97	0.92	0.76	0.88	9.9	5	9	8	14	
1919...	7.4	49	-38	0.65	0.48	0.28	0.47	4.8	3	14	9	8	
1920...	15.2	59	-32	0.48	0.33	0.16	0.32	3.2	3	11	9	11	
1921...	16.5	59	-33	0.52	0.33	0.38	0.41	3.9	4	14	7	10	
1922...	8.5	55	-34	0.75	0.76	0.53	0.68	7.4	5	11	8	12	
1923...	22.2	62	-36	0.38	0.35	0.23	0.32	3.6	3	16	8	7	
1924...	2.9	58	-46	0.40	0.39	0.54	0.44	5.3	4	12	8	12	
1925...	16.5	67	-38	0.24	0.30	0.30	0.28	2.6	3	12	8	11	
1926...	9.2	55	-36	0.60	0.50	0.59	0.56	5.5	3	14	8	9	
1927...	1.8	43	-38	0.96	0.52	0.91	0.80	8.7	5	14	7	10	
1928...	20.7	57	-30	0.47	0.23	0.27	0.32	3.2	3	14	7	10	
1929...	12.5	59	-38	0.68	0.88	0.88	0.81	9.9	5	12	8	11	
1930...	19.9	53	-30	0.21	0.16	0.21	0.19	2.0	3	12	8	11	
1931...	21.0	58	-21	0.25	0.15	0.29	0.23	2.7	2	13	8	10	
1932...	12.4	60	-31	0.17	0.14	0.23	0.20	1.7	3	14	10	7	
1933...	8.6	62	-38	1.09	0.79	0.83	0.90	9.7	6	9	8	14	
1934...	12.6	53	-44	0.40	0.22	0.29	0.30	3.9	5	9	8	14	
1935...	12.6	51	-34	0.65	0.52	0.34	0.50	5.6	5	10	7	14	
1936...	15.0	59	-36	0.50	0.32	0.46	0.43	5.5	4	11	8	12	
1937...	11.4	51	-33	0.62	0.51	0.49	0.54	6.5	6	10	9	12	
1938...	18.2	55	-41	0.40	0.30	0.26	0.32	4.1	4	11	10	10	
1939...	26.7	70	-20	0.27	0.30	0.27	0.28	2.3	4	10	10	11	
1940...	19.8	59	-36	0.79	0.28	0.19	0.42	4.0	4	10	7	14	
1941...	22.5	66	-20	0.15	0.17	0.14	0.15	1.8	3	10	11	10	
1942...	10.9	53	-30	0.67	0.52	0.39	0.53	7.1	7	7	8	16	
1943...	21.5	65	-22	0.15	0.12	0.10	0.12	1.0	2	16	9	6	
1944...	15.8	50	-27	0.08	0.05	0.04	0.06	0.9	1	13	10	8	
1945...	7.0	56	-38	0.83	0.64	0.46	0.64	8.8	6	8	8	15	
1946...	13.3	55	-35	0.54	0.43	0.77	0.58	6.2	6	7	10	14	
1947...	14.2	54	-36	0.48	0.44	0.35	0.42	5.5	4	8	10	13	
Period	13.4	72	-50	0.53	0.44	0.44	0.47	5.0	4	12	8	11	

NAT.
HIST.

Climatological Data for December 1947

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches				Number of days				Prevailing direction of wind	Observer			
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear			Pt. cloudy	Cloudy	
Eastern Division																					
Arvilla, 1 1/2 mi. N	Grand Forks	960	4	8.9	.....	36	24†	-27	31	0.46	.....	0.27	2	5.8	8	11	7	13	nw.	Albert Thoren.
Carrington	Foster	1,579	50	10.2	-2.4	39	26	-22	31	0.27	-0.14	0.25	2	4.0	2	13	4	14	.....	Soo Line Agent.
Casselton	Cass	934	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ashton Lockhart
Cavalier	Pembina	894	40	7.2	-3.3	40	26	-25	31	1.19	+0.50	0.41	14	13.9	8	6	12	13	se.	City Light & Power Co.	
Colgate	Steele	1,180	14	.....	.....	.....	.....	.....	.....	0.22	-0.31	0.22	2	4.0	1	3	20	8	n.	O. M. Jensen.
Cooperstown	Griggs	1,428	51	11.0	-2.0	36	26	-27	31	0.22	-0.36	0.14	1	3.0	2	12	4	15	nw.	R. J. Lockner	
Courtenay	Stutsman	1,523	17	.....	.....	.....	.....	.....	.....	0.59	-0.08	0.32	2	7.5	8	0	7	24	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	72	9.4	-0.1	36	26	-22	31	0.40	-0.14	0.22	2	6.0	8	5	5	21	w.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	47	13.9	-1.1	39	14†	-16	31	0.25	-0.24	0.25	2	2.5	1	15	13	3	nw.	N. Dak. Agri. Exp. Sta.	
Edmore, 1 1/2 miles W.	Ramsey	1,524	24	8.4	-2.1	33	26	-25	31	0.47	-0.07	0.25	2	6.1	6	13	5	13	w.	Mike Davis.	
Ellendale	Dickey	1,457	49	13.2	-3.1	41	26	-15	9	0.26	-0.20	0.26	2	3.1	1	8	8	15	nw.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	67	10.0	-1.5	34	14	-20	31	0.46	-0.26	0.30	2	5.5	7	6	6	19	n.	U. S. Weather Bureau.	
Forman	Sargent	1,249	56	13.5	-1.8	40	14	-19	9	0.30	-0.26	0.23	2	2.8	2	7	11	13	sw.	Art Waterman.	
Fullerton	Dickey	1,439	50	14.6	-0.6	40	14	-15	9†	0.42	-0.25	0.36	2	4.2	2	5	11	15	nw.	F. O. Alin.	
Gackle	Logan	1,951	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tony Martin.
Grafton	Walsh	827	56	9.6	-1.1	42	26	-27	31	1.63	+1.10	0.46	14	18.5	8	11	12	8	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	57	9.0	-2.0	32	13†	-23	31	0.55	-0.07	0.34	2	6.5	9	5	7	19	se.	University of N. Dak.	
Grand Forks Apt. 2 1/2 mi. W	Grand Forks	834	7	8.0	.....	33	26	-25	31	0.44	.....	0.18	9	6.6	10	5	8	18	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	19	13.0	-4.7	40	14	-20	9	0.15	-0.37	0.10	10	4.0	3	10	5	16	nw.	Soo Line Agent.	
Hannah	Cavalier	1,568	54	7.4	-0.2	35	26	-30	31	0.68	+0.09	0.30	2	13.5	6	3	18	10	sw.	A. E. Prior.	
Hillsboro	Trails	901	42	11.1	-0.9	37	14	-22	9	0.33	-0.31	0.16	2	5.7	5	5	16	10	n.	Alfred Jahnke.	
Jamestown, 2 miles SE	Stutsman	1,457	56	13.0	-0.9	39	14	-19	31	0.24	-0.41	0.24	2	3.0	1	5	12	14	sw.	N. Dak. State Hospital.	
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	7	10.8	.....	38	14	-20	31	0.56	.....	0.33	2	6.5	5	5	8	18	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	7	11.8	.....	40	26	-26	31	0.41	.....	0.41	2	3.6	1	6	7	18	w.	U. S. Wildlife Refuge.
LaMoure	LaMoure	.....	1	14.1	.....	47	26	-19	31	0.37	.....	0.35	2	5.6	3	5	18	8	se.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	52	8.0	-0.8	35	26	-28	31	0.86	+0.23	0.38	1-2	8.6	6	9	10	12	.....	V. Sturlaugson.
Larimore	Grand Forks	1,134	55	10.6	-0.9	38	26	-22	31	0.40	-0.16	0.28	2	4.2	2	5	5	21	nw.	Jesse P. Phillips.	
Lisbon	Ransom	1,091	44	13.4	-1.4	40	14	-24	9	0.32	-0.19	0.27	2	3.5	3	8	20	3	nw.	Robert M. Jodsaas.	
Mayville	Trails	975	52	11.4	-1.9	36	26	-21	31	0.76	+0.24	0.26	2	8.0	9	8	12	11	n.	H. A. Ragaz.	
McHenry, 6 miles NNE	Eddy	1,509	25	9.2	-1.6	36	26	-26	31	0.42	-0.07	0.28	1-2	5.1	6	6	8	17	w.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	36	12.5	-2.6	39	14	-22	9	0.30	-0.16	0.21	2	3.5	2	9	13	9	.....	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	.....	8.4	.....	35	26	-28	31	0.54	.....	0.29	2	6.8	6	8	7	16	w.	Harold Feldner
Oakes	Dickey	1,318	19	12.2	-4.0	43	14	-18	9	0.37	-0.13	0.21	3	4.1	2	12	7	12	nw.	C. M. Hagen.	
Park River	Walsh	995	44	9.6	-1.5	38	26	-21	31	0.42	-0.09	0.21	14	5.8	3	20	1	10	nw.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	795	74	6.0	-1.0	35	26	-26	31	1.06	+0.44	0.43	14	11.9	12	5	8	18	nw.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	17	9.4	.....	36	26	-24	31	0.38	-0.10	0.26	2	4.8	5	10	11	10	nw.	T. C. Overland.
Sharon	Steele	1,516	24	8.8	-3.4	35	26	-27	31	0.56	+0.08	0.35	2	7.0	6	12	6	13	nw.	Hugh Lyon.	
Valley City	Barnes	1,229	43	14.0	-0.5	39	14	-20	31	0.37	-0.21	0.29	2	6.0	4	4	9	18	nw.	Miss I. C. Robertson.	
Wahpeton	Richland	962	56	12.5	-3.3	38	14	-20	9	0.22	-0.28	0.10	2†	5.0	3	11	13	7	nw.	State School of Science.	
Average for Eastern Division				10.7	-1.9	47	26	-28	31	0.48	-0.05	0.46	14	6.1	5	7	10	14	nw.		
Middle Division																					
Ashley, 1 mile SE	McIntosh	2,025	52	14.0	-0.8	39	26	-17	31	0.23	-0.27	0.14	1-2	3.5	2	5	17	9	w.	Eddie H. Glur.	
Belcourt	Rolette	1,960	3	7.0	48	26	-30	31	0.65	0.28	1-2	7.4	4	7	6	18	5	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	45	9.6	-0.1	35	25	-29	31	1.01	+0.58	0.36	1-2	12.5	5	10	4	17	sw.	Robert L. Peterson.	
Bismarck	Burleigh	1,670	73	15.4	-0.3	42	26	-20	31	0.26	-0.22	0.23	2	3.8	3	4	5	22	nw.	U. S. Weather Bureau.	
Bismarck Airport, 2 1/2 mi. SE.	Burleigh	1,650	8	14.3	+1.5	43	26	-20	31	0.26	-0.31	0.23	2	3.9	3	4	5	22	nw.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	56	10.2	-1.9	38	14	-28	31	0.61	+0.14	0.26	14	10.0	6	6	10	15	nw.	N. D. School of Forestry.	
Butte, 3 miles WSW	McLean	1,880	23	14.6	-0.2	40	26	-20	31	0.50	+0.01	0.40	2	8.0	2	9	5	17	sw.	R. L. Williams.	
Carson, 2 1/2 miles SW	Grant	2,500	36	20.8	+4.2	48	26	-11	8	0.30	-0.18	0.30	2	4.0	1	5	17	9	nw.	J. W. Evans.	
Center	Oliver	2,100	10	14.7	.....	45	26	-22	31	0.31	.....	0.22	1-2	6.0	3	7	13	11	nw.	Fred L. Heinz.
Drake	McHenry	1,634	18	13.0	-2.4	46	20	-22	31	0.45	+0.04	0.27	2	6.2	6	13	16	2	nw.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	52	10.3	0.0	42	26	-26	31	0.68	+0.25	0.34	2	6.4	7	11	10	10	w.	State Tuberculosis San.	
Eckman	Bottineau	1,500	42	10.0	-0.3	39	19	-32	31	0.83	+0.36	0.23	13-14	9.6	9	5	11	15	se.	E. R. Sherman.	
Fessenden	Wells	1,610	36	11.6	-0.2	39	19†	-23	31	0.48	-0.08	0.25	2	6.4	4	10	16	5	n.	John V. Zuber.	
Fort Yates	Sioux	1,670	48	18.8	-0.4	50	26	-12	8	0.20	-0.18	0.20	2	3.0	1	10	11	10	se.	P. J. Jacobson.	
Foxholm, 6 1/2 miles NE.	Ward	1,609	27	14.4	+0.2	40	19	-25	31	0.25	-0.26	0.13	1-2	7.5	5	6	3	22	nw.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	71	14.5	+0.1	40	19	-18	31	0.30	-0.18	0.21	1-2	3.8	4	8	8	15	nw.	Mae H. Vorachek.	
Granville	McHenry	1,504	41	12.6	-0.4	40	19	-25	31	0.39	-0.07	0.18	2	3.5	5	14	9	8	nw.	Fred Roble.	
Hansboro	Towner	1,597	40	8.0	-1.2	38	26	-23	31	0.42	-0.12	0.25	1-2	10.8	5	5	13	13	nw.	W. E. Disher.	
Harvey, 3 miles SE	Wells	1,596	45	.....	.....	.....	.....	.....	.....	0.21	-0.32	0.14	2	2.9	3	9	8	14	se.	H. J. Reynolds.
Leeds	Benson	1,515	7	8.0	.....	34	26	-26	31	0.30	.....	0.22	2	4.0	2	2	24	5	nw.	John Dulmage.
Linton	Emmons	1,711	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,																			

Climatological Data for December 1947-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days			Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Dickinson Airpt., 5½ mi. S.	Stark	2,587	7	20.8	.....	48	26	-15	8	0.26	.....	0.26	1-2	2.7	2	6	10	15	w.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	49	19.2	+1.2	.....	.....	.....	.....	0.33	-0.08	.....	.....	.....	.....	.....	.....	.....	.....	O. T. Evenson.
Elbowoods	McLean	2,082	55	16.2	+0.3	43	19	-18	31	0.20	-0.20	0.20	2	3.0	1	15	12	4	nw.	H. W. Case.
Epping	Williams	2,224	39	17.8	+2.6	44	26	-12	31	0.25	-0.20	0.19	2	4.0	2	13	14	4	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	19	.....	.....	.....	.....	.....	.....	0.21	-0.25	0.21	2	1.5	1	10	10	11	nw.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	7	23.8	+5.4	52	26	-9	8	0.29	-0.18	0.29	2	3.5	1	19	8	4	nw.	Chester K. Puda.
Grenora	Williams	2,114	39	19.0	+6.7	42	19	-19	8	0.52	0.00	0.32	29	5.7	2	17	7	7	se.	L. D. Nielson.
Halliday	Dunn	2,073	6	.....	.....	.....	.....	.....	.....	0.17	.....	0.14	1-2	4.0	2	12	12	7	nw.	John Kisse.
Hettinger	Adams	2,675	41	23.1	+4.8	54	26	-16	8	0.13	-0.24	0.13	2	2.0	1	12	16	3	nw.	Edgar Martin.
Kenmare	Ward	1,799	16	16.6	+2.4	42	26	-20	31	0.69	+0.26	0.22	2	8.4	7	8	2	21	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	39	22.2	+3.7	50	26	-6	31	0.32	-0.08	0.30	1-2	4.5	2	12	11	8	nw.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	33	22.9	.....	54	26	-14	8	0.30	-0.18	0.25	1-2	3.5	2	20	3	8	w.	Harry Roberts.
Mott	Hettinger	2,424	41	21.3	+5.5	51	26	-11	8	0.40	-0.08	0.40	1-2	4.0	1	15	10	6	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	56	21.3	+3.9	52	26	-15	8	0.24	-0.16	0.24	2	2.5	1	7	18	6	nw.	Alfred Hasel.
Parshall	Mountrail	1,929	33	14.8	+0.3	40	26	-26	31	0.21	-0.20	0.16	2	2.8	3	6	17	8	se.	C. E. Shubert.
Portal	Burke	1,954	34	12.6	0.0	38	13	-26	31	1.07	+0.62	0.35	28-29	13.7	5	8	13	10	sw.	U. S. Customs Service.
Powers Lake	Burke	2,205	43	13.4	-2.4	38	14	-21	31	0.59	+0.05	0.35	29	7.9	3	9	10	12	w.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	32	21.6	+5.4	49	26	-10	8	0.40	-0.02	0.40	1-2	4.9	1	10	11	10	sw.	Assumption Abbey.
Ryder	Ward	2,108	19	.....	.....	.....	.....	.....	.....	0.18	-0.28	0.12	2	2.6	3	8	6	17	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	22	16.8	+3.3	46	26	-18	31	0.18	-0.27	0.12	2	2.5	3	9	1	21	w.	H. J. Bugge.
Stanley	Mountrail	2,258	10	12.2	.....	38	19	-24	31	0.42	.....	0.25	1-2	7.4	2	6	8	17	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	19	.....	.....	.....	.....	.....	.....	0.47	+0.05	0.17	1-2	6.1	8	11	9	11	sw.	Geo. N. Pilgard.
Tioga	Williams	2,279	19	.....	.....	.....	.....	.....	.....	0.40	-0.04	0.20	1-2	5.0	2	13	7	11	sw.	L. A. Simon.
Trotters	Golden Valley	2,221	22	.....	.....	.....	.....	.....	.....	0.14	-0.26	0.04	29	2.9	7	5	20	6	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	7	17.2	.....	45	26	-19	31	0.23	.....	0.20	2	2.5	3	9	6	16	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	35	21.4	+6.1	48	26	-10	31	0.37	-0.16	0.17	2	4.4	3	10	18	3	w.	J. C. Zeller.
Wildrose	Williams	2,258	18	.....	.....	.....	.....	.....	.....	0.64	+0.12	0.26	29	5.0	4	12	7	12	sw.	Jonathan Winkler.
Williston	Williams	1,878	69	21.2	+7.4	49	26	-10	8	0.24	-0.34	0.11	1-2	2.8	5	7	7	17	se.	U. S. Weather Bureau.
Average for Western Division				18.8	+2.9	54	26	-27	31	0.35	-0.09	0.40	1-2	4.5	3	11	9	11	nw.	
Average for the State				14.2	+0.8	54	26	-36	31	0.42	-0.05	0.46	14	5.5	4	8	10	13	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

T. Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for December 1947

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum	26	25	13	19	27	22	12	8	22	19	24	24	35	37	18	19	20	20	34	30	24	24	26	34	32	39	29	18	24	5	8	23.1	
	Minimum	3	17	10	-7	-2	9	8	-7	-10	5	9	1	2	21	-6	-7	6	2	6	12	12	6	9	9	15	13	17	6	9	-1	-17	4.8	
Bismarck Airport	Maximum	28	26	19	16	28	25	20	8	25	15	15	17	39	40	15	20	19	20	41	33	21	18	30	39	34	43	28	22	26	12	-8	24.2	
	Minimum	16	18	-1	-1	13	3	3	-4	3	5	1	6	11	5	-8	-4	3	6	14	11	6	2	2	-2	15	12	10	11	12	-12	-20	4.4	
Bottineau	Maximum	30	27	20	11	23	23	22	6	15	13	11	1	30	38	10	12	15	10	32	32	25	18	17	34	29	32	30	22	16	11	0	20.3	
	Minimum	13	19	3	1	6	12	5	-21	-10	-17	-17	6	-1	-1	-7	-7	-5	-5	-1	5	13	1	-1	1	10	7	18	5	10	-10	-28	0.1	
Carson	Maximum	38	25	18	18	25	27	23	23	27	27	28	29	39	39	23	23	30	40	42	40	39	38	40	42	43	48	39	25	28	16	17	30.9	
	Minimum	22	12	8	15	10	10	11	-1	6	8	5	15	11	3	8	6	13	24	15	16	13	17	17	17	24	21	15	14	-1	7	10.7		
Crosby	Maximum	29	19	21	23	28	22	5	12	15	10	15	32	40	19	18	20	26	33	37	29	27	28	29	37	37	39	26	25	13	-6	15	23.3	
	Minimum	19	13	13	12	11	10	0	-15	-9	-2	-5	-6	3	17	-7	5	4	0	-5	9	11	9	10	11	15	17	16	12	-12	-25	4.7		
Devils Lake	Maximum	26	24	11	10	23	23	23	-2	17	3	13	12	32	25	9	14	16	7	35	23	24	18	20	35	26	36	28	14	15	-4	1	18.0	
	Minimum	18	5	-7	-7	10	18	3	-17	-12	-10	-6	8	9	5	-8	1	-8	-3	5	14	4	2	10	9	14	13	5	2	-5	-17	-22	0.9	
Dickinson Airport	Maximum	35	27	21	22	23	24	21	14	24	24	26	30	37	39	21	20	38	38	38	35	35	38	38	42	42	48	33	31	32	13	19	29.9	
	Minimum	22	14	0	14	12	10	-8	-15	9	2	5	17	26	6	3	5	20	15	27	16	15	18	22	20	21	30	20	19	6	-7	-5	11.6	
Dunn Center	Maximum	24	24	8	8	24	26	23	3	20	18	16	18	30	34	8	14	14	15	20	26	29	25	18	31	28	29	29	16	21	18	-4	19.8	
	Minimum	14	8	-16	-18	7	13	3	-19	-16	-9	6	12	7	8	-7	-6	-3	8	8	11	11	4	4	6	4	1	1	-7	15	-10	-20	0.3	
Fargo Airport	Maximum	29	25	16	9	20	28	22	9	19	10	18	15	35	35	18	18	14	19	39	38	26	26	23	37	36	39	33	21	18	15	3	22.8	
	Minimum	8	14	-11	-14	5	8	2	-18	-16	-8	-2	4	3	4	-11	3	-4	0	-4	13	4	1	4	9	12	16	14	5	10	-13	-23	0.5	
Fullerton	Maximum	31	22	12	5	28	25	20	14	29	27	20	17	36	40	27	22	14	19	19	34	27	25	26	35	36	39	37	23	21	-20	-1	24.2	
	Minimum	14	12	-7	-11	3	13	12	-11	-15	3	8	1	0	19	-7	7	3	-1	1	17	13	10	16	8	20	12	18	4	14	-2	-15	5.1	
Garrison	Maximum	30	26	19	20	28	22	21	7	23	17	16	14	36	35	20	19	12	15	40	30	23	18	32	39	35	40	28	21	23	-7	10	23.4	
	Minimum	21	12	7	6	20	6	-4	-5	2	2	0	3	9	2	-7	5	2	6	12	15	8	5	5	7	16	15	19	13	7	-17	-18	5.6	
Golva	Maximum	36	31	25	26	23	24	22	19	24	26	28	32	42	42	25	26	41	42	42	39	42	40	42	44	46	52	44	36	36	17	24	33.5	
	Minimum	25	16	0	18	15	11	4	-9	10	6	14	18	22	18	4	5	24	19	35	17	19	18	22	12	22	30	27	19	12	-9	-7	14.1	
Grafton	Maximum	30	23	16	3	25	26	24	9	11	15	7	13	34	34	15	11	12	9	22	33	23	17	19	33	34	42	37	17	18	-21	-4	20.3	
	Minimum	20	14	-6	-15	-7	18	8	-13	-20	-5	-13	0	8	14	-10	-8	-12	-12	2	1	1	2	-5	-3	22	10	15	-9	10	-12	-27	-1.0	
Grand Forks Airport	Maximum	24	23	12	4	22	26	24	1	16	12	11	16	32	30	2	10	12	13	26	26	22	19	21	32	28	33	29	16	19	10	-7	18.2	
	Minimum	14	10	-17	-17	2	20	1	-20	-18	-9	-10	-1	7	2	-8	-4	-11	-1	12	12	5	-2	-2	-1	5	4	-4	-8	10	-14	-25	-2.2	
Jamestown Airport	Maximum	28	23	13	8	26	24	22	2	20	14	16	14	33	38	13	18	10	16	37	29	24	23	24	34	31	37	30	15	19	8	3	21.0	
	Minimum	12	2	-11	-14	7	5	-2	-16	-12	1	9	2	2	6	-10	2	-4	-4	1	14	4	4	6	8	14	7	10	9	8	-13	-20	0.7	
Kenmare	Maximum	26	23	18	23	31	25	13	13	25	19	21	31	38	18	19	21	20	38	39	29	34	30	34	39	40	42	28	22	17	4	25.6		
	Minimum	20	19	11	7	9	14	5	-17	-5	2	-2	4	8	18	-7	10	6	2	1	18	15	6	6	18	17	19	18	12	15	-5	-20	7.5	
Langdon	Maximum	30	30	15	10	21	23	18	3	9	9	10	15	33	30	9	10	10	5	29	30	27	23	18	30	29	35	33	13	12	8	3	18.5	
	Minimum	19	15	-10	-13	2	14	3	-23	-20	-15	-14	7	8	9	-18	-4	-12	-15	-2	8	6	-1	0	1	6	5	10	-6	5	-18	-28	-2.6	
Marmarth	Maximum	44	36	26	26	28	28	23	17	27	25	28	31	40	41	26	18	41	45	42	42	41	42	39	44	45	50	43	42	35	16	22	34.0	
	Minimum	20	14	-4	20	14	-3	7	-2	12	6	2	12	15	18	5	0	12	12	26	12	12	14	10	10	18	20	15	20	16	-5	-6	10.4	
Minot Airport	Maximum	26	23	19	21	29	23	16	5	18	11	17	12	34	38	16	20	20	16	41	27	27	25	29	38	34	38	29	21	19	-1	11	22.7	
	Minimum	20	12	5	10	18	10	-6	-8	6	-2	2	2	0	18	-5	8	11	2	2	14	19	10	5	15	15	16	16	15	12	1	-16	-16	6.2
Mott	Maximum	39	35	20	22	25	26	26	16	26	27	31	32	41	38	24	24	37	40	42	38	41	42	41	45	46	51	45	28	33	20	19	32.9	
	Minimum	18	13	-5	12	14	1	12	-11	10	-2	7	10	15	14	1	8	2	14	18	14	13	15	18	15	17	23	20	10	16	-5	-6	9.7	
Pembina Airport	Maximum	26	22	7	8	22	25	23	-5	13	12	3	10	34	21	-2	8	8	5	25	25	16	13	16	32	30	35	30	12	14	5	8	15.6	
	Minimum	19	3	-17	-19	6	20	-6	-20	-16	-5	-9	2	6	-3	-16	-2	-18	-7	2	13	-3	-4	-1	1	14	8	-5	-10	5	19	-26	-3.5	
Sharon	Maximum	30	22	14	13	24	22	21	-1	12	12	14	15	31	28	7	14	-2	12	25	31	22	22	19	31	30	35	28	15	15	13	-11	18.2	
	Minimum	15	9	-9	-13	1	11	-1	-20	-20	-10	-10	5	5	7	-11	-11	-13	-11	4	10	12	12	8	4	14	10	15	-1	8	-13	-27	-0.7	
Steele	Maximum	27	24	20	10	29	23	22	7	22	20	20	15	36	38	14	18	14	20	35	36	25	17	25	35	34	39	36	24	24	15	-5	23.2	
	Minimum	13	17	-1	-12	8	6	5	-11	-13	0	3	3	2	10	-15	-2	1	1	1	10	11	2	4	2	12	9	12	7	15	-8	-23	2.2	
Valley City	Maximum	29	25	23	8	27	27	23	17	18	20	18	16	34	39	20	20	14	15	20	31	26	23	22	33	34	38	36	22	20	19	-2	23.4	
	Minimum	16	18	-6	-12	2	15	7	-12	-18	0	-3	10	-5	23	-5	-3	-4	-6	5	19	17	18	18	7	21	9	19	6	13	-6	-20	4.6	
Wahpeton	Maximum	33	24	18	3	24	27	24	12	15	22	16	18	30	38	34	22	17	17	20	26	30	26	16	26	32	30	29	21	20	-3	22.2		
	Minimum	16	12	-3	-17	0	19	9	-12	-20	-2	-8	10	2	20	-7	-6	-5	0	6	11	12	13	7	11	18	3	15	-4	11	-8	-16	2.8	
Williston	Maximum	34	25	23	24	32	29	18	11	21	19	23	29	42	44	24	22	33	31	43	32	36	37	39	44	42	49	30	36	29	-5	20	29.9	
	Minimum	25	18	16	16	20	16	-6	-10	11	7	4	10	27	4	4	12	13	5	25	18	18	13	21	22	21	26	20	22	4	-8	-9	12.1	

Daily Precipitation for December 1947

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James		.25							.02																							0.27	
Cassette	Red.																																	
Cooperstown	Sheyenne	.14																															0.22	
Courtenay	James		.32	T.				.01		T.						.03	.08	.03															0.59	
Devils Lake ¹⁵	Devils Lake	T.	.22	T.		T.		.01		.02	T.	T.	.01	T.	.06	.01	.04	T.	T.						.04	.06	T.	T.	T.	.02	T.	.03	T.	0.40
Edgeley	James	T.	.25																														0.25	
Edmore	Devils Lake	T.	.25	T.		T.	T.	T.	T.	T.	.02	T.	.02	T.	.08			.08	T.	T.													0.47	
Ellendale	James	T.	.26							T.																							0.26	
Fargo ¹⁵	Red.	T.	.30				T.	.03		.03			.02	T.	.05		.01	T.	T.	T.													0.46	
Forman	Sheyenne		.23							.07																							0.30	
Fullerton	James		.36							T.				T.				T.	T.		T.												0.42	
Gackle	do																																	
Grafton	Red.		.42				T.	.05		.15	.37	T.	T.	.02	.46	.06																	1.63	
Grand Forks Airport ³	do		.10		T.		T.			.18	T.	.03	.02	.03	T.	.01	.01	T.	T.														0.44	
Hankinson ²	do			.03						.02	.10	T.	T.	T.																			0.15	
Hannah	Pembina		.30	.02												.16																	0.68	
Hillsboro	Red.		.16					.02		.09	T.	T.			T.	.03	.02	T.	T.														0.33	
Jamestown Airport ³	James	T.	.33	T.		T.	T.	.02		.02	T.	T.	T.		.16	.03	T.	T.	T.														0.56	
Langdon	Pembina		.38					.03		T.				.02		.28	.02		T.														0.86	
Larimore	Red.		.28													.12																	0.40	
Lisbon	Sheyenne		.27							.04		.01																					0.32	
Mayville	Red.	.01	.26		T.		T.	.03	T.	.13		T.	.02		.13	.12	.05		T.	.01													0.76	
McHenry	James		.28							.02			T.		.04	.03	.04		.01														0.42	
McLeod	Sheyenne		.21							.09																							0.30	
Oakes ²	James		.16	.21																													0.37	
Park River	Red.		.19							T.	T.					.21																	0.42	
Pembina Airport ³	do	T.	.31	T.		T.	.01	.03		.05	T.	.01	.07	.03	.43	T.	T.	.01	.03	.01	T.												1.06	
Petersburg	do		.26					.03		.03			.01		.04	.04			T.		T.												0.38	
Sharon	do		.35	T.				.02		.02				.02				.14	T.														0.56	
Valley City	Sheyenne		.29							T.					.02	T.	.04																0.37	
Wahpeton	Red.		.10							T.				T.		T.	.02																0.22	
Middle Division																																		
Ashley ³	Missouri		.14	.09					T.							T.	T.																0.23	
Bisbee	Devils Lake		.36	.05					T.	.07		T.	T.		.29	T.	T.																1.01	
Bismarck Airport ¹⁵	Missouri	T.	.23	T.	T.	T.		.01	T.	.07	T.	T.	T.	T.	.02	T.	T.	T.															0.26	
Bottineau ²	Mouse	T.	.22	T.					T.	.02	T.	.02	T.	T.	.26	T.	.02		T.														0.61	
Butte	do	T.	.40												.10	T.		T.															0.50	
Carson	Heart		.30																														0.30	
Center	Missouri	T.	.22												.03	T.																	0.31	
Drake ²	Mouse		.27						.01		.03				.01	.12	.01																0.45	
Dunseith	do		.34	.01					.18	.01			.01				.08																0.68	
Eckman	do		.21		T.				.02		T.	.02		T.	.23	.06	.03		.08														0.83	
Fessenden	James		.25			T.	T.			T.					.09						.10	T.							.04				0.48	
Fort Yates	Missouri		.20																														0.20	
Foxholm	Mouse		.13					T.		.01				.06	T.	T.		T.															0.25	
Garrison ³	Missouri	.02	.19					T.	T.	.03					.06	T.		T.															0.30	
Granville	Mouse		.18					T.	T.	.04	T.				.09	T.	.04	.04															0.39	
Hansboro	Devils Lake		.25							T.					.10	T.			.02														0.42	
Linton	Missouri																																	
Maddock	Sheyenne	.26	T.					T.		T.	T.	T.	T.	.23	T.	.06	T.	T.															0.55	
Mandan ²	Missouri		.36	T.				T.	T.	T.	T.	T.	T.			.02	.01																0.39	
Max ²	do		.11							T.					.01	.02		.03															0.17	
McClusky	do		.25												.12																		0.37	
Minot Airport ³	Mouse		.01	.17	T.	T.	T.	T.	T.	.01	T.	T.	.01	T.	.04	T.	.02	.01	T.														0.30	
Mohall	do		.03	.27	T.			.04		.01					.16	.03	.11	.04															0.81	
Napoleon	Missouri		.28						T.	T.	.01				.02	.01	T.																0.31	
New Salem	Heart	.25							T.							.05	.03	T.															0.33	
Pettibone	James		.45	T.						T.	T.	T.			.06	.02		.02	T.														0.55	
Rolla	Devils Lake	T.	.36	T.				.03		.04			.02		.22	T.	.01	T.															0.74	
Rugby	Mouse		.27	T.				T.	T.	.05		.02	.05		.10		.20		.01														0.69	
Selridge	Missouri		.19																															

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May Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

THE LIBRARY OF THE

CLIMATOLOGICAL DATA

MAR 5 1948

UNIVERSITY OF ILLINOIS

NORTH DAKOTA SECTION

F. J. BAVENDICK

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GENERAL SUMMARY

From a climatological standpoint, 1947 was another very good year. Rainfall averaged above normal, with the greatest above normal amounts in the western sections where most needed. No unusual weather conditions prevailed during the year, except the large number of cloudy and foggy days during November and December. January was mild, but the temperature averaged below normal from February through June. At the end of May, precipitation was below normal and crops were backward, but with the wet, cool weather during June, and the favorable temperatures during July, crops made excellent growth. The fall weather was pleasant and much outdoor work was accomplished up to the middle of November. There was very little snow on the ground in the western third of the State during December but the snow was unusually deep in the eastern part, necessitating considerable feeding of livestock. The precipitation for October and November was 45% above normal and soil moisture was good when the ground froze.

The average temperature for the state was 40.1°, or 0.5° above the 1892-1947 average, and 0.7 lower than the 1946 average. The highest annual temperature was 43.6° at Fort Yates; the lowest, 35.6° at Belcourt. The absolute range in temperature was 147°, from 110° at Fort Yates on August 3d to -37° at Willow City on January 3d.

The average precipitation for the state was 18.18 inches, or 1.06 inches above the 1892-1947 average, and 1.53 inches more than the average for 1946. The greatest annual precipitation reported was 25.16 inches at Grafton; the least was 12.93 inches at Mott. The greatest monthly amount was 10.09 inches at Richardson in June. The average snowfall was 36.4 inches. The average number of days with 0.01 inch or more of precipitation was 86.

There were 123 clear days, 124 partly cloudy days, and 118 cloudy days. The prevailing wind was northwest.

CLIMATOLOGICAL SUMMARY, 1947

Month	Temperature in degrees Fahrenheit				Precipitation, in inches			Number of days				Prevailing direction of the wind
	Mean	Departure	Highest	Lowest	Average	Departure	Snowfall	Precip., 0.1 inch or more	Clear	Pt. cloudy	Cloudy	
January	16.0	+9.0	57	-37	0.35	-0.12	4.4	4	8	11	12	nw.
February	8.8	-1.1	53	-36	0.40	-0.06	3.5	5	7	9	12	nw.
March	22.3	-1.7	66	-23	0.34	-0.45	4.1	6	8	11	12	nw.
April	39.9	-1.7	90	0	1.48	+0.06	5.8	8	8	11	11	nw.
May	49.9	-3.5	87	13	1.11	-1.17	T.	7	10	14	7	nw.
June	59.6	-3.2	90	24	5.81	+2.29	0	14	7	12	11	se.
July	70.4	+1.4	103	33	1.79	-0.62	0	6	20	9	2	se.
August	70.9	+4.3	100	34	2.67	+0.58	0	9	16	11	4	se.
September ..	55.5	-1.2	101	13	1.45	-0.12	T.	7	11	9	10	nw.
October	51.2	+7.0	97	15	1.31	+0.30	0.9	7	14	9	8	nw.
November	22.5	-4.1	63	-19	1.05	+0.44	11.2	9	6	8	16	nw.
December ...	14.2	+0.8	54	-36	0.42	-0.05	5.5	4	8	10	13	nw.
Annual ...	40.1	+0.5	110	-37	18.18	+1.08	36.4	86	123	124	118	nw.

ANNUAL COMPARATIVE DATA FOR THE STATE

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.8	108	-52	20.24	21.00	13.79	18.34	34.9	70	157	95	114
1893...	35.8	112	-54	18.02	16.33	13.19	15.85	46.1	65	154	104	107
1894...	40.3	107	-47	17.45	14.55	14.84	15.61	24.6	56	174	100	91
1895...	37.7	104	-50	18.41	16.97	16.69	17.36	20.9	63	155	117	93
1896...	37.3	107	-42	26.30	21.67	19.97	22.65	48.3	80	143	111	112
1897...	37.8	109	-48	18.75	16.04	13.26	16.02	33.9	63	162	105	98
1898...	39.2	106	-38	18.97	15.55	13.92	16.15	22.7	57	159	108	98
1899...	36.9	109	-48	17.40	19.48	15.98	17.62	26.6	60	161	105	99
1900...	40.9	114	-48	21.61	18.70	16.88	19.06	23.2	62	178	97	90
1901...	40.4	110	-43	24.35	17.54	16.33	19.41	20.2	63	175	92	98
1902...	39.4	106	-39	21.66	18.50	17.89	19.35	29.9	62	160	79	126
1903...	38.3	108	-49	20.18	18.27	19.28	19.24	28.8	65	166	81	118
1904...	37.6	103	-52	21.59	18.26	13.59	17.81	38.1	68	150	73	143
1905...	39.3	107	-46	23.23	19.17	14.34	18.91	29.6	66	152	79	134
1906...	39.4	109	-40	21.14	17.68	21.28	20.03	35.4	78	164	93	108
1907...	36.9	104	-49	17.17	13.06	12.69	14.31	33.7	63	175	101	89
1908...	40.7	104	-41	18.84	17.77	19.05	18.55	43.7	75	164	97	105
1909...	38.2	109	-48	21.79	15.89	16.61	18.10	33.5	71	143	110	112
1910...	41.1	114	-50	11.88	12.17	13.56	12.54	21.0	52	180	92	93
1911...	38.0	108	-43	21.73	18.60	14.94	18.42	36.5	76	160	100	105
1912...	38.2	118	-52	22.72	19.73	18.71	20.39	19.3	74	161	102	103
1913...	40.0	106	-54	17.85	13.39	12.70	14.65	19.4	64	166	104	95
1914...	40.1	109	-47	19.81	19.57	17.53	18.97	30.0	70	155	110	100
1915...	39.7	104	-48	21.06	19.06	17.72	19.28	21.2	72	148	101	116
1916...	36.2	105	-56	24.11	18.88	16.63	19.87	54.2	70	170	97	99
1917...	36.3	114	-48	12.61	10.44	9.20	10.75	40.5	60	154	111	100
1918...	40.0	102	-44	18.01	16.00	14.01	16.01	29.7	63	159	104	102
1919...	38.6	108	-44	20.55	14.71	11.51	15.59	47.2	60	165	107	93
1920...	39.5	108	-44	17.67	14.26	13.92	15.28	27.9	64	166	108	92
1921...	42.0	110	-33	23.05	18.96	16.30	19.44	29.4	74	158	111	96
1922...	39.7	115	-46	21.97	19.09	18.62	19.89	42.8	75	155	100	110
1923...	40.7	103	-40	19.12	16.65	17.60	17.79	30.1	64	160	110	95
1924...	38.2	105	-46	20.23	16.39	14.74	17.12	26.1	66	158	101	107
1925...	40.6	111	-39	21.91	14.74	13.29	16.65	19.7	64	158	107	100
1926...	40.7	108	-36	18.05	14.40	13.65	15.37	23.7	68	151	105	109
1927...	38.0	101	-44	22.72	21.25	20.56	21.51	36.2	79	150	102	113
1928...	41.1	107	-41	20.03	18.12	15.48	17.88	17.3	59	177	101	88
1929...	38.0	109	-44	15.09	13.27	14.57	14.31	41.8	65	171	98	96
1930...	41.4	107	-43	17.13	14.19	13.36	14.89	25.0	66	166	101	98
1931...	44.9	111	-31	18.48	14.10	12.41	15.00	18.0	56	180	92	93
1932...	40.0	108	-34	18.43	16.39	16.71	17.18	34.9	69	156	108	102
1933...	41.1	110	-45	14.01	12.74	13.59	13.45	42.2	65	161	104	100
1934...	43.4	112	-44	13.33	8.61	6.60	9.51	15.2	54	160	109	96
1935...	39.4	110	-44	21.24	17.97	14.91	18.04	33.3	77	137	113	115
1936...	38.8	121	-60	10.09	8.21	8.18	8.83	35.2	59	171	110	85
1937...	39.1	111	-44	20.10	17.37	13.63	17.03	36.0	69	150	111	104
1938...	41.9	109	-41	15.27	14.60	16.13	15.33	30.6	73	149	116	100
1939...	41.9	108	-46	15.56	13.88	13.01	14.15	25.5	71	161	109	95
1940...	41.0	107	-39	19.23	16.79	16.14	17.39	33.6	80	142	110	114
1941...	42.2	111	-40	25.07	22.42	22.19	23.23	25.1	92	128	115	122
1942...	40.9	105	-35	22.40	17.62	16.22	18.75	35.3	84	128	114	123
1943...	39.8	104	-44	18.89	18.58	17.68	18.38	41.0	76	157	109	99
1944...	41.0	103	-43	24.55	20.75	19.05	21.45	29.3	79	151	109	106
1945...	39.0	105	-38	16.46	14.56	13.53	14.85	31.8	77	131	118	116
1946...	40.8	110	-40	19.33	15.89	14.73	16.65	34.9	78	136	123	106
1947...	40.1	110	-37	18.93	18.00	17.61	18.18	36.4	86	123	124	118
Period	39.6	121	-60	19.39	16.59	15.37	17.12	31.2	69	157	104	104

THE WEATHER BY MONTHS

JANUARY.—Temperatures averaged 9.0° above normal. There were only a few days with readings below normal but the 2d and 3d were the coldest days since February, 1944. During the 4th week, the warm weather in the southwestern part of the state melted the snow and there was a heavy run of water. Precipitation was below normal except over the northern counties where heavy snowfalls occurred. During the blizzard on the 13-14th, the January records for high winds were exceeded at both Bismarck and Fargo.

FEBRUARY.—The temperature averaged below normal. The 3d, with temperatures below zero and strong wind with gusts up to 65 miles per hour, was one of the states most disagreeable days. Precipitation generally was light. The severe blizzard on the 6th, 7th and 8th, extending from divide and northern Williams

THE WEATHER BY MONTHS—Continued

counties eastward to Rolette County, blocked roads with huge drifts.

MARCH.—Precipitation was light but it occurred on many days. Due to the large number of cattle and the long period of snow cover, feed shortages were apparent over the southwest and in some central counties as the winter closed. At Williston the Missouri River ice breakup occurred on the 23d with the break at Bismarck on the 28th. The bottomlands were inundated for 48 to 60 hours as the crest moved downstream usually reaching heights of 2 to 5 feet above flood stage.

APRIL.—Snowfall this month was more than twice the normal. Falls were very light in the northern tier of counties, but other parts of the state had more than 10 inches. Temperatures were below normal and precipitation averaged near normal. The heavy wet snow resulted in water-logged fields and flooding of ditches and rivers in the east portion of the state. The snow-melt, added to the spring rise of the Red and Sheyenne rivers, resulted in considerable flooding. At Fargo and Grand Forks about 100 homes were evacuated because of the unusually high water. The wet, cool and cloudy conditions combined to delay farm work.

MAY.—Both temperature and precipitation averaged below normal. The outstanding feature was the cold during the last week, especially from the 27th through the 29th, when all stations recorded record breaking low temperatures for this late in the season. Damage to vegetation, while considerable, was lessened due to retarded growth caused by a cool spring. Pastures and ranges were backward, affording little feed. Spring wheat and other small grain planting was completed, with corn, flax and potato planting well underway at the close of the month.

JUNE.—June was a rainy, cool month. Frosts were reported but because of the backward season little damage resulted. Sunshine was 16% below normal. All conditions, especially the abundant rainfall, combined to afford an excellent stand of small grain with some early planted heading at the close of the month. Corn was backward because of the cool weather. Crops, pastures and ranges were excellent at the close of the month.

JULY.—The temperature averaged above normal but the precipitation was slightly below normal. Due to the heavy precipitation during June and the favorable temperatures during July, crops were in excellent condition at the end of July. Corn, however, was backward due to a late start. Pastures were very good. Eight people were killed and many others were injured during the tornado in Walsh County on the 3d. Livestock losses were severe.

AUGUST.—This was the second warmest August since climatological records began. Precipitation occurred mostly during the first half of the month, but it was erratic, with heavy amounts over the north portion. Excellent harvesting and combining weather prevailed except in the north portion where some delays were caused by heavy rain.

SEPTEMBER.—The first half of September was very warm. During the last half of the month the temperatures were below average. Precipitation was near the normal in the east and middle divisions, but it was light and more than a half inch below normal in the western division. The first general frost occurred on the 22d, but while it was a shorter than normal growing season, most crops had matured with much above average yields of small grains.

OCTOBER.—The month of October was unusually warm with

no periods of cold weather. It was the warmest October since state averages have been kept, beginning in 1892. Precipitation varied greatly but generally was well above normal over the east and central sections and below normal over the west portion. Many long time records for greatest October precipitation were broken, especially in the middle division.

NOVEMBER.—The outstanding feature of the month's weather was the heavy snowfall. It was the third heaviest snow in any November and the heaviest since 1919. There was a snow cover over the entire state after the 11th, ranging from a light cover over the northwest portion to heavy over the southeast portion. Fargo had 15.4 inches on the ground on the 28th. No severe storms occurred, but the cold, cloudy weather was somewhat disagreeable. Much yard feeding of livestock was necessary during the last half of the month in the eastern sections.

DECEMBER.—Temperatures averaged above normal over the western part of the state and below normal over the eastern part. Precipitation was heavy over the northeastern portion and light over the southwest portion. There were no severe storms but the blowing and drifting snow on the afternoon of the 14th, 24th and a few other dates made near blizzard conditions for several hours. Livestock were mostly yard fed in the eastern part of the state due to the heavy snow cover.

KILLING FROSTS

STATIONS	Last in Spring	First in Autumn	STATIONS	Last in Spring	First in Autumn
<i>Eastern Div.</i>					
Arvilla	May 30	Sept. 22	Linton	May 30	Sept. 15
Carrington	May 29	Sept. 22	Maddock	May 30	Sept. 22
Cassellton	May 30	Sept. 22	Mandan	May 30	Sept. 22
Cavalier	May 30	Sept. 21	Max	May 29	Sept. 15
Cooperstown	May 30	Sept. 22	McClusky	May 30	Sept. 22
Devils Lake	June 1	Sept. 22	Minot	May 29	Sept. 22
Edgeley	May 30	Sept. 22	Mohall	May 29	Sept. 22
Edmore	June 1	Sept. 15	Napoleon	May 30	Sept. 22
Ellendale	May 30	Sept. 22	New Salem	May 29	Sept. 22
Fargo	May 30	Sept. 22	Pettibone	May 30	Sept. 15
Forman	May 29	Sept. 22	Rolla	May 31	Sept. 22
Fullerton	May 30	Sept. 22	Steele	May 30	Sept. 15
Grafton	May 30	Sept. 22	Towner	June 1	Sept. 15
Grand Forks	May 28	Sept. 22	Turtle Lake	May 29	Sept. 22
Hankinson	May 29	Sept. 24	Underwood	May 29	Sept. 15
Hannah	June 1	Sept. 22	Velva	May 29	Sept. 22
Hillsboro	May 28	Sept. 22	Washburn	May 29	Sept. 22
Jamestown	May 30	Sept. 22	Westhope	June 11	Sept. 15
Langdon	June 11	Sept. 15	Willow City	May 30	Sept. 22
Larimore	May 30	Sept. 22	Wilton	May 30	Sept. 22
Lisbon	May 30	Sept. 22	Wishek	May 30	Sept. 22
Mayville	May 28	Sept. 22	<i>Western Div.</i>		
McHenry	May 30	Sept. 22	Almont	May 29	Sept. 22
McLeod	May 28	Sept. 22	Amidon	May 29	Sept. 15
Oakes	May 30	Sept. 22	Belfield	May 29	Sept. 15
Park River	May 30	Sept. 22	Bowbells	June 11	Sept. 15
Pembina	May 30	Sept. 22	Bowman	May 30	Sept. 22
Petersburg	May 30	Sept. 22	Crosby	May 30	Sept. 15
Sharon	May 30	Sept. 22	Dickinson	May 30	Sept. 15
Valley City	May 30	Sept. 22	Dunn Center	May 30	Sept. 22
Wahpeton	May 30	Sept. 22	Elbowoods	June 11	Sept. 15
<i>Middle Div.</i>			Epping	May 29	Sept. 15
Ashley	May 29	Sept. 22	Golva	May 29	Sept. 23
Belcourt	June 1	Sept. 16	Grenora	May 29	Sept. 22
Bisbee	May 1	Sept. 22	Hettinger	May 30	Sept. 15
Bismarck	May 30	Sept. 22	Kenmare	May 29	Sept. 22
Bottineau	June 1	Sept. 15	Marmarth	May 30	Sept. 15
Butte	May 30	Sept. 22	Medora	May 29	Sept. 15
Carson	May 30	Sept. 22	Mott	May 30	Sept. 15
Center	May 30	Sept. 15	New England	May 29	Sept. 15
Drake	May 29	Sept. 22	New Ireland	May 30	Sept. 15
Dunseith	May 30	Sept. 21	Parshall	May 30	Sept. 15
Eckman	June 1	Sept. 22	Portal	May 29	Sept. 22
Fessenden	May 29	Sept. 22	Powers Lake	May 29	Sept. 15
Fort Yates	May 29	Sept. 15	Richardson	May 29	Sept. 22
Foxholm	May 30	Sept. 22	Sanish	May 30	Sept. 15
Garrison	May 29	Sept. 22	Stanley	May 30	Sept. 15
Granville	May 30	Sept. 15	Van Hook	May 30	Sept. 15
Hansboro	June 1	Sept. 22	Watford City	May 30	Sept. 15
Leeds	June 1	Sept. 22	Williston	May 28	Sept. 24

MONTHLY AMOUNTS OF EVAPORATION—inches, and WIND MOVEMENT—miles, FOR 1947

Station	Data	Apr.	May	June	July	Aug.	Sept.	Seasonal	Average	Observer
Dickinson	Evaporation	3.438	5.245	4.356	7.025	6.736	5.134	31.934	41 years 34.636	Agri. Experiment Substa.
	Wind movement	4.000	4.625	3.885	2.820	3.095	3.645	22.070		
Mandan	Evaporation	2.426	5.371	4.202	6.397*	6.390	4.398	29.184	34 years 33.311	No. Gr. Plains Field Sta.
	Wind movement	3.820	4.635	3.660	2.367	3.163	3.488	21.133		

Climatological Data for the Year 1947

Station [distance from Post Office indicated]	County	Elevation, feet	Temperature (degrees Fahrenheit)						Precipitation (inches)						Number of days						Prevailing direction of wind
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	With .01 in or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																					
Carrington	Foster	1,579	50	39.2	105	Aug. 4	-23	Feb. 1	50	20.16	5.71	June	0.27	Mar. †	38.2	92	125	67	173	.....
Casselton	Cass	934	52	41.6	104	Aug. 4	-29	Jan. 3	52	20.52	5.01	June	0.30	Jan.	49.8	110	106	123	136	n.	
Cavalier	Pembina	894	12	37.5	101	Aug. 22	-25	Dec. 31	40	21.66	6.02	June	0.21	Mar.	37.3	95	98	138	129	se.	
Cooperstown	Griggs	1,428	51	39.7	108	Aug. 3	-30	Jan. 3	51	19.81	4.45	June	0.10	Mar.	39.8	62	125	83	157	n.w.	
Devils Lake	Ramsey	1,471	43	39.1	103	Aug. 4†	-25	Feb. 1	72	16.39	3.08	June	0.18	Mar.	36.2	117	85	115	165	n.w.	
Edgeley, 2 mi. S	LaMoure	1,568	47	40.9	105	Aug. 4†	-25	Jan. 3	47	14.17	3.40	June	0.18	Mar.	33.6	95	120	145	100	n.w.	
Edmore, 1½ mi. W	Ramsey	1,524	24	36.3	101	Aug. 4	-29	Jan. 2†	24	18.94	4.78	June	0.19	Mar.	20.8	89	183	82	100	n.w.	
Ellendale	Dickey	1,457	49	41.3	104	Aug. 22	-28	Feb. 7	49	17.30	4.93	June	0.26	Dec.	46.9	84	127	84	154	n.w.	
Fargo Airport, 2½ mi. NNW	Cass	895	67	40.8	105	Aug. 4	-26	Jan. 3	67	18.63	3.69	Apr.	0.32	Jan.	42.8	123	83	108	174	n.	
Forman	Sargent	1,249	56	42.8	105	Aug. 4†	-24	Jan. 3	56	16.22	5.11	June	0.20	Jan.	31.8	64	166	97	102	sw.	
Fullerton	Dickey	1,439	50	42.4	103	Aug. 21	-22	Jan. 3	50	17.81	4.09	June	0.15	Jan.	55.1	79	110	131	124	n.w.	
Gackle	Logan	1,951	17	40.8	105	Aug. 3	-27	Jan. 3	17	17.12	5.81	June	0.04	Mar.	23.8	54	103	168	94	n.w.	
Grafton	Walsh	827	56	39.9	100	Sept. 5	-27	Dec. 31	56	25.16	5.26	July	0.32	Mar.	57.0	101	127	135	103	n.w.	
Grand Forks, 2 mi. W	Grand Forks	830	57	39.3	102	Aug. 4	-23	Dec. 31	57	21.69	5.97	June	0.29	Mar.	45.2	118	79	132	154	n.w.	
Grand Fks Airport, 2½ mi. W	Grand Forks	834	7	38.4	102	Aug. 4	-25	Dec. 31	7	21.61	6.38	June	0.42	Mar.	44.2	125	77	96	192	n.w.	
Hankinson	Richland	1,068	19	42.0	105	Aug. 4†	-21	Jan. 3	19	17.77	3.99	June	0.15	Jan. †	49.1	86	108	98	159	n.w.	
Hannah	Cavalier	1,568	54	36.0	95	Aug. 4†	-30	Dec. 31	54	19.86	6.64	Aug.	0.24	May	46.1	78	69	225	71	n.w.	
Hillsboro	Trails	901	42	41.1	106	Aug. 4	-26	Jan. 3	42	21.36	4.30	June	0.22	Jan.	54.5	87	77	182	106	n.	
Jamestown, 2 mi. SE	Stutsman	1,457	56	41.6	107	Aug. 4	-25	Jan. 3	56	18.24	4.38	June	0.16	Jan.	33.5	70	76	151	138	n.w.	
Jamestown Airport, 2 mi. NE	Stutsman	1,493	7	40.0	105	Aug. 4	-29	Jan. 3	7	20.11	4.05	June	0.34	Mar.	46.2	114	83	111	171	n.w.	
Kensal, 7 mi. SW	Stutsman	1,440	7	39.8	104	Aug. 4	-27	Jan. 3	7	18.35	5.41	June	0.24	Jan.	26.9	73	97	112	156	n.w.	
Langdon, 1½ mi. SE	Cavalier	1,615	52	37.2	100	Aug. 22	-28	Feb. 4†	52	19.15	5.66	June	0.48	Apr.	35.6	120	128	130	107	n.w.	
Larimore	Grand Forks	1,134	55	39.6	102	Aug. 4	-22	Jan. 3†	55	18.03	3.56	Aug.	0.13	Mar.	27.9	73	72	116	177	n.w.	
Lisbon	Ransom	1,091	44	41.5	104	Aug. 4	-24	Jan. 3†	44	17.63	5.58	June	0.15	Jan.	36.6	91	136	88	141	n.w.	
Mayville	Trails	975	52	40.9	101	Aug. 4	-24	Jan. 3	52	20.67	4.27	June	0.09	Jan.	50.4	111	100	169	96	n.	
McHenry, 6 mi. NNE	Eddy	1,509	25	38.4	105	Aug. 4	-29	Jan. 3	25	15.95	3.63	June	0.14	Mar.	25.9	96	112	114	139	n.w.	
McLeod, 3 mi. E	Ransom	1,075	36	42.1	104	Aug. 4	-25	Jan. 3	36	16.68	5.15	June	0.07	Jan.	32.2	71	167	99	99	se.	
Oakes	Dickey	1,318	19	41.9	106	Aug. 9	-22	Jan. 3†	19	16.95	4.76	June	0.19	Jan.	46.8	85	174	80	111	n.w.	
Park River	Walsh	998	44	39.0	102	Aug. 22	-22	Jan. 2	44	19.15	3.82	July	0.15	Mar.	29.2	75	179	85	101	n.w.	
Pembina, 1 mi. S	Pembina	795	74	36.9	96	Aug. 22	-27	Jan. 3	74	22.38	6.58	June	0.21	Feb.	30.0	122	60	125	180	n.w.	
Petersburg	Nelson	1,524	4	37.9	102	Aug. 4	-25	Jan. 3†	17	19.62	5.71	Aug.	0.10	Mar.	28.8	81	140	143	82	n.w.	
Sharon	Steele	1,516	21	38.8	103	Aug. 4	-27	Jan. 3†	24	20.49	3.71	June	0.25	Mar.	47.2	113	127	103	135	n.w.	
Valley City	Barnes	1,229	43	42.1	103	Aug. 4	-31	Jan. 3	43	16.63	3.68	June	0.37	Dec.	52.5	78	132	111	122	n.w.	
Wahpeton	Richland	962	56	43.0	104	Aug. 4	-24	Jan. 3	56	18.66	4.01	Apr. †	0.07	Jan.	42.2	104	144	140	81	n.w.	
Middle Division																					
Ashley, 1 mi. SE	McIntosh	2,025	52	40.6	108	Aug. 4	-24	Jan. 3	52	17.18	4.98	July	0.07	Feb.	28.9	92	128	95	142	n.w.	
Bisbee	Towner	1,601	45	38.5	102	Aug. 3	-30	Feb. 1	45	20.32	5.40	June	0.37	Jan.	51.6	80	139	95	131	n.w.	
Bismarck	Burleigh	1,670	73	42.3	103	Aug. 3†	-30	Jan. 3	73	17.04	6.80	June	0.18	Mar.	42.7	88	84	99	182	n.w.	
Bismarck Airport, 2½ mi. SE	Burleigh	1,650	8	41.8	105	Aug. 3†	-30	Jan. 3	8	18.84	8.29	June	0.21	Mar.	43.2	96	84	99	182	n.w.	
Bottineau	Bottineau	1,638	56	37.4	98	Aug. 3	-35	Feb. 1	56	20.72	6.83	June	0.34	Mar.	44.1	98	103	146	116	n.w.	
Butte, 3 mi. WSW	McLean	1,880	23	40.0	100	Aug. 3	-25	Feb. 1	23	22.19	6.55	June	0.35	Feb.	46.7	68	129	84	152	n.w.	
Carson, 2½ mi. SW	Grant	2,500	36	42.6	108	Aug. 9	-26	Feb. 1	36	17.04	7.31	June	0.08	Feb.	33.7	73	104	158	103	n.w.	
Center	Oliver	2,100	10	39.8	104	Aug. 21	-31	Jan. 3	10	16.26	5.19	June	0.13	Feb.	45.4	80	97	186	82	n.w.	
Drake	McHenry	1,634	18	39.0	102	Aug. 3†	-28	Feb. 2	18	18.89	5.73	June	0.31	Mar.	42.3	102	174	121	70	n.w.	
Dunseith, 2 mi. NNE	Rolette	1,682	52	37.6	97	Aug. 4	-30	Feb. 1	52	15.79	4.29	June	0.09	Mar.	23.8	77	80	164	121	n.w.	
Eckman	Bottineau	1,500	42	37.0	99	Aug. 4	-32	Jan. 3†	42	18.95	5.17	June	0.19	Mar.	40.1	99	125	145	95	n.w.	
Fessenden	Wells	1,610	36	40.0	106	Aug. 4	-25	Feb. 1	36	22.49	5.42	Sept.	0.24	Mar.	43.4	73	150	158	57	n.	
Fort Yates	Sioux	1,670	48	43.6	110	Aug. 3	-29	Jan. 3	48	15.40	4.45	Oct.	0.20	Feb. †	26.8	53	174	85	106	n.w.	
Foxholm, 6½ mi. NE	Ward	1,609	23	39.9	100	July 28†	-28	Feb. 1	23	15.20	5.81	June	0.25	Mar. †	39.9	77	91	94	180	n.w.	
Garrison	McLean	1,911	71	40.3	103	Aug. 3†	-25	Feb. 1	71	20.00	7.11	June	0.30	Dec.	46.1	94	102	103	160	n.w.	
Granville	McHenry	1,504	41	39.6	102	Aug. 4	-28	Feb. 1	41	15.34	5.39	June	0.15	Mar.	34.1	85	118	73	74	n.w.	
Hansboro	Towner	1,597	40	36.8	102	Aug. 3	-29	Feb. 1	40	14.95	5.37	Aug.	0.20	Mar.	37.6	77	81	152	129	n.w.	
Leeds	Benson	1,515	7	38.6	104	Aug. 4	-28	Jan. 2†	7	16.74	3.86	June	0.23	Mar.	31.4	76	97	190	78	n.w.	
Linton	Emmons	1,711	31	43.2	106	Aug. 3	-30	Jan. 3	31	20.61	5.40	June	0.06	Feb.	29.7	82	116	99	150	n.w.	
Maddock, 1 mi. E	Benson	1,604	33	39.7	104	Aug. 4	-29	Jan. 3†	33	18.24	4.57	June	0.21	Mar.	39.7	89	79	173	113	n.w.	
Mandan, 1½ mi. SW	Morton	1,750	34	41.4	101	Aug. 21	-28	Jan. 3	34	21.13	7.65	June	0.17	Feb.	41.7	99	111	64	190	n.w.	
Max	McLean	2,093	19	38.4	102	Aug. 3	-28	Feb. 1†	19	17.34	4.64	June	0.14	Mar.	39.1	82	126	78	161	n.w.	
McClusky	Sheridan	1,943	23	40.4	103	Aug. 21	-25	Feb. 1	30	18.25											

Monthly and Annual Mean Temperatures for the Year 1947, with Departures from the Normal

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.	Temp.	Dep.
Eastern Division																										
Arvilla	13.8	.....	7.2	.....	23.6	.....	39.6	.....	50.4	.....	66.2	.....	71.0	.....	70.6	.....	55.0	.....	51.4	.....	21.2	.....	8.9	.....	39.4	.....
Carrington	14.2	+7.5	6.4	-2.5	21.7	-2.0	39.1	-0.5	48.8	-4.3	59.8	-3.6	70.6	+1.2	70.8	+3.7	54.5	-2.4	51.8	+8.1	21.9	-5.4	10.2	-2.4	39.2	-0.2
Casselton	17.7	+12.7	10.5	+1.4	25.5	+0.8	40.0	-1.6	51.6	-3.1	61.4	-2.5	72.2	+2.3	75.4	+8.3	58.8	+0.9	53.2	+8.5	22.2	-4.8	10.0	-2.8	41.6	+1.7
Cavalier	11.0	+9.6	5.7	-0.4	23.6	+2.6	39.4	+0.2	48.8	-4.8	58.6	-4.0	67.0	-2.0	67.1	+1.2	53.0	-2.6	48.6	+5.6	20.5	-4.2	7.2	-3.3	37.5	-0.2
Cooperstown	15.0	+10.7	8.0	+0.2	23.6	-0.7	39.6	-0.7	49.1	-4.7	59.6	-3.6	68.2	-1.4	72.9	+5.5	56.5	-1.2	52.0	+7.3	21.4	-5.9	11.0	-2.0	39.7	+0.3
Devils Lake	13.6	+11.8	6.8	-1.7	21.4	+1.6	39.6	+0.8	48.6	-4.0	59.8	-2.1	71.4	+4.0	71.4	+6.6	55.0	-0.9	51.0	+8.6	21.5	-3.0	9.4	-0.1	39.1	+2.1
Edgeley	18.0	+9.2	8.8	-4.0	24.3	-3.0	38.7	-3.9	50.3	-4.1	60.6	-3.0	70.4	+0.5	72.1	+4.4	57.4	-0.9	53.0	+7.4	23.6	-5.7	13.9	-1.1	40.9	-0.4
Edmore	10.4	+10.2	3.0	-1.8	17.9	-3.2	37.0	-2.3	46.2	-7.0	55.8	-6.5	66.8	-0.7	68.5	+3.7	52.8	-3.6	48.4	+5.9	19.6	-5.0	8.4	-2.1	36.3	-1.0
Ellendale	19.2	+9.2	10.2	-2.9	24.9	-2.3	38.8	-3.9	50.8	-4.5	60.9	-3.9	69.2	-1.7	72.7	+4.0	59.1	+0.3	53.6	+7.7	23.3	-5.1	13.2	-3.1	41.3	-0.5
Fargo Airport	16.1	+12.3	9.3	+1.2	24.6	+1.9	39.5	-1.1	50.0	-5.1	61.4	-3.0	71.5	+3.4	73.9	+7.8	57.7	-0.5	53.2	+8.7	22.2	-4.9	10.0	-1.5	40.8	+1.6
Forman	20.0	+12.4	12.3	+0.4	25.9	-0.1	40.6	-3.4	51.2	-4.5	62.4	-2.6	72.0	+1.9	76.6	+8.4	60.7	+1.2	54.9	+8.9	23.6	-5.0	13.5	-1.8	42.8	+1.3
Fullerton	21.0	+11.9	12.2	-0.2	26.0	-1.1	40.2	-2.5	50.8	-4.0	61.7	-2.5	70.2	0.0	73.6	+5.9	59.2	+1.2	54.2	+8.9	24.6	-4.4	14.6	-0.6	42.4	+1.1
Gackle	17.0	+9.3	10.0	-5.5	23.6	-1.7	39.5	-2.6	50.4	-3.9	60.2	-3.1	70.4	+0.4	73.0	+5.5	57.2	-0.6	52.8	+7.4	22.8	-4.6	12.2	-2.5	40.8	+0.3
Grafton	14.2	+11.6	8.0	+0.7	23.8	+2.1	40.2	-0.4	49.8	-4.3	60.9	-2.8	70.6	+1.8	71.8	+5.6	55.7	-1.3	52.4	+8.6	21.8	-3.2	9.6	-1.1	39.9	+1.4
Grand Forks	12.6	+9.0	7.0	-0.7	23.0	+0.5	39.7	-1.6	49.8	-4.4	61.4	-2.0	70.8	+2.3	70.5	+4.5	55.2	-1.7	51.6	+7.9	21.0	-4.8	9.0	-2.0	39.3	+0.6
Grand Forks Airport	11.5	.....	6.5	.....	21.4	.....	38.6	.....	48.6	.....	60.0	.....	70.0	.....	70.6	.....	54.9	.....	51.2	.....	20.0	.....	8.0	.....	38.4	.....
Hankinson	18.4	+10.5	9.4	-4.7	25.6	-3.0	39.4	-4.1	50.8	-7.2	61.6	-5.3	72.2	+0.8	75.2	+4.5	60.2	-0.3	54.2	+7.6	23.5	-5.4	13.0	-4.7	42.0	-0.9
Hannah	9.0	+10.2	1.4	-1.2	16.0	-3.2	35.5	-2.4	45.7	-5.9	57.8	-2.7	68.6	+2.4	70.4	+6.3	52.0	-2.8	48.4	+7.6	19.6	-1.1	7.4	-0.2	36.0	+0.6
Hillsboro	16.4	+11.5	9.4	-0.8	24.5	-0.8	40.0	-2.2	51.0	-3.8	61.6	-3.1	71.8	+1.1	73.6	+5.4	58.0	-1.0	53.4	+8.2	22.0	-5.3	11.1	-0.9	41.1	+0.7
Jamestown	18.4	+11.3	10.4	+0.5	24.8	+0.4	40.6	-1.1	51.1	-3.0	61.1	-2.6	71.6	+2.0	74.0	+7.1	57.8	+0.8	53.4	+8.7	23.6	-3.7	13.0	-0.9	41.6	+1.6
Jamestown Airport	16.1	.....	9.6	.....	24.4	.....	39.4	.....	49.5	.....	59.7	.....	69.2	.....	71.6	.....	55.7	.....	51.8	.....	22.4	.....	10.8	.....	40.0	.....
Kensal	15.8	.....	9.4	.....	23.2	.....	39.2	.....	49.2	.....	59.6	.....	69.5	.....	70.8	.....	55.6	.....	51.6	.....	22.6	.....	11.8	.....	39.8	.....
Langdon	9.9	+10.3	3.5	-1.3	19.7	-0.1	38.4	+0.8	47.2	-4.6	58.1	-2.5	69.0	+2.7	69.6	+5.9	53.8	+0.3	49.4	+8.5	20.0	-3.7	8.0	-0.8	37.2	+1.3
Larimore	14.8	+11.0	7.9	+0.2	22.8	-0.1	39.2	-1.0	50.2	-3.2	59.8	-3.1	70.0	+1.9	70.6	+4.7	55.8	-0.6	52.2	+8.1	21.4	-4.4	10.6	-0.9	39.6	+1.1
Lisbon	20.4	+12.8	11.2	-0.4	26.2	-1.1	38.6	-3.5	49.4	-5.4	60.3	-4.1	69.9	-0.5	72.5	+4.7	56.0	-2.1	55.4	+10.7	25.0	-3.8	13.4	-1.4	41.5	+0.5
Mayville	16.0	+10.0	8.9	-0.9	24.8	+0.1	40.5	-2.0	49.7	-5.7	61.2	-3.3	71.8	+1.6	72.4	+4.5	58.0	-0.5	53.4	+7.4	22.0	-5.8	11.4	-1.9	40.9	+0.3
McHenry	13.2	+11.7	6.6	+1.2	21.4	-1.6	38.5	-2.1	48.4	-4.3	58.4	-3.4	69.2	+1.1	70.6	+4.9	54.6	-1.2	50.8	+7.5	20.4	-6.2	9.2	-1.6	38.4	+0.5
McLeod	19.0	+10.7	11.2	-1.8	26.2	-1.6	39.2	-4.4	51.0	-4.8	61.8	-3.5	71.0	-0.4	74.8	+6.8	58.9	-0.7	56.2	+9.7	23.0	-6.7	12.5	-2.6	42.1	+0.1
Oakes	17.6	+8.7	10.5	-2.4	24.8	-2.9	39.8	-3.0	51.1	-4.5	62.5	-2.8	72.1	+0.4	75.4	+6.3	59.0	0.0	54.2	+8.2	23.6	-5.0	12.2	-4.0	41.9	-0.1
Oakes	12.6	+9.7	6.6	-1.1	21.7	-1.1	38.8	-1.7	49.3	-4.3	59.5	-3.6	70.5	+2.0	71.1	+4.5	55.9	-1.0	51.7	+7.9	21.0	-6.0	9.6	-1.5	39.0	+0.9
Park River	9.0	+11.4	3.2	+0.4	19.6	+1.2	37.4	-1.1	47.0	-6.2	59.8	-3.0	68.5	+0.7	68.8	+4.1	53.3	-1.2	49.4	+7.8	20.9	-2.5	6.0	-1.0	36.9	+0.9
Pembina	12.0	.....	5.1	.....	20.0	.....	37.9	.....	48.2	.....	58.2	.....	69.0	.....	69.8	.....	54.6	.....	50.4	.....	20.2	.....	9.4	.....	37.9	.....
Petersburg	13.4	+9.9	7.3	-2.2	22.8	-1.4	39.3	-0.3	49.2	-4.9	58.7	-4.3	69.8	-1.0	69.6	+1.7	55.0	-0.4	51.4	+7.8	20.2	-4.5	8.8	-3.4	38.8	-0.4
Sharon	18.6	+12.5	10.8	-0.7	26.2	-0.1	41.4	-1.0	51.6	-3.0	61.8	-2.3	70.8	+0.7	74.2	+6.5	58.0	-0.8	53.6	+8.5	23.8	-4.2	14.0	-0.5	42.1	+1.3
Valley City	19.4	+10.7	10.6	-1.8	27.2	-0.4	41.6	-2.6	51.9	-4.4	62.4	-3.4	72.0	+1.1	72.2	+8.5	61.8	+1.8	55.7	+8.7	24.2	-4.8	12.5	-3.3	43.0	+0.8
Wahpeton	19.4	+10.7	10.6	-1.8	27.2	-0.4	41.6	-2.6	51.9	-4.4	62.4	-3.4	72.0	+1.1	72.2	+8.5	61.8	+1.8	55.7	+8.7	24.2	-4.8	12.5	-3.3	43.0	+0.8
Middle Division																										
Ashley	17.2	+8.5	9.9	-1.5	23.8	-1.1	39.0	-3.4	51.0	-3.2	60.1	-3.1	69.2	-0.5	72.6	+5.4	56.0	-1.9	52.1	+7.7	22.0	-6.0	14.0	-0.8	40.6	0.0
Bisbee	11.6	+9.8	5.0	-1.5	20.1	-2.4	39.8	-0.9	49.0	-3.7	59.3	-2.8	70.7	+3.2	70.2	+4.5	53.6	-3.1	50.2	+6.4	22.5	-3.9	9.6	-0.1	38.5	+0.5
Bismarek	19.4	+11.4	10.8	-0.8	25.6	+0.4	41.6	-1.5	51.8	-3.0	61.2	-3.0	72.2	+1.7	73.4	+5.2	57.0	-1.1	53.3	+8.1	25.4	-3.1	15.4	-0.3	42.3	+1.2
Bismarek Airport	18.3	+12.0	11.6	+3.1	25.6	+3.7	41.4	+1.0	51.3	-1.7	61.8	-1.1	72.6	+3.2	72.8	+6.1	57.0	-0.3	52.4	+8.8	23.5	-3.0	14.3	+1.5	41.8	+2.8
Bottineau	8.2	+6.8	1.0	-3.9	18.8	-2.2	38.8	-0.2	48.5	-3.8	59.0	-2.8	70.0	+2.4	69.4	+4.5	53.8	-1.7	50.6	+9.2	20.8	-2.8	10.2	+1.9	37.4	+0.6
Butte	17.4	+9.5	8.4	-4.7	22.8	-3.6	40.4	-0.9	49.8	-5.0	59.1	-3.8	68.2	-1.8	69.0	+1.8	55.0	-2.5	51.7	+6.9	22.2	-4.3	14.6	-2.2	40.0	-0.6
Carson	19.4	+9.3	13.0	-1.5	24.4	-2.6	41.2	-1.3	51.2	-3.3	60.2	-3.5	72.0	+1.2	72.4	+3.8	58.0	-0.1	53.4	+8.9	24.9	-4.9	20.8	+4.2	42.6	+0.9
Center	17.0	.....	9.3	.....	23.4	.....	38.8	.....	48.2	.....	58.4															

Monthly and Annual Precipitation for the Year 1947, with Departures from the Normal

	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
Stations	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
Eastern Division																										
Arvilla	0.43	.....	0.66	.....	0.31	.....	1.54	.....	1.60	.....	4.17	.....	2.58	.....	4.76	.....	2.49	.....	1.88	.....	1.55	.....	0.46	.....	22.43	.....
Carrington	0.34	-0.08	0.77	+0.29	0.27	-0.42	0.69	-0.64	2.27	-0.22	5.71	+2.26	2.23	-0.88	2.37	+0.30	2.14	+0.72	2.18	+1.15	0.92	+0.37	0.27	-0.14	20.16	+3.21
Casselton	0.30	-0.23	0.78	+0.19	0.53	-0.23	4.11	+2.36	1.78	-1.02	5.01	+1.42	1.00	-1.69	1.57	-0.97	1.84	-0.06	1.73	-0.22	2.07	+1.83	0.46	-0.06	20.52	+0.82
Cavalier	0.40	-0.27	0.25	-0.26	0.21	-0.55	0.68	-0.71	0.47	-1.79	6.02	+2.94	3.04	+0.40	3.02	+0.51	3.53	+1.21	1.54	+0.25	1.31	+0.57	1.19	+0.50	21.66	+2.80
Colgate	0.42	-0.06	0.28	-0.21	0.18	-0.62	2.10	+0.44	1.71	-0.99	4.37	+0.89	0.20	-2.33	2.78	+0.30	2.91	+1.08	1.07	-0.04	1.67	+1.00	0.22	-0.31	17.91	-0.85
Cooperstown	0.61	+0.10	0.80	+0.28	0.10	-0.61	1.32	-0.07	0.87	-1.66	4.45	+1.18	1.84	-0.75	2.61	0.00	2.46	+0.70	2.83	+1.75	1.70	+1.06	0.22	-0.36	19.81	+1.62
Courtenay	0.52	-0.09	0.58	0.00	0.35	-0.49	0.92	-0.51	1.50	-0.93	3.50	+0.30	0.75	-1.57	1.73	-0.67	2.17	+0.33	2.14	+0.99	1.91	+1.34	0.59	-0.08	16.66	-1.66
Devils Lake	0.44	-0.03	0.44	-0.06	0.18	-0.60	0.70	-0.82	1.23	-0.80	3.08	-0.48	1.70	-0.87	2.66	+0.18	2.95	+1.32	1.64	+0.39	0.97	+0.25	0.40	-0.14	16.39	-1.68
Edgeley	0.24	-0.25	0.31	-0.17	0.18	-0.65	1.85	+0.10	1.30	-1.26	3.40	-0.27	1.60	-0.91	0.66	-1.69	1.01	-0.65	1.59	+0.57	1.72	+1.20	0.25	-0.24	14.17	-4.22
Edmore	0.22	-0.27	0.46	+0.05	0.19	-0.50	0.74	-0.52	1.19	-0.67	4.78	+1.67	1.48	-1.36	2.48	+0.15	4.32	+2.47	1.98	+1.00	0.63	+0.01	0.47	-0.07	18.94	+1.96
Ellendale	0.27	-0.19	0.30	-0.19	0.40	-0.55	2.82	+0.96	1.00	-1.61	4.93	+1.52	2.78	+0.13	0.44	-2.33	0.42	-1.04	1.44	+0.38	2.02	+1.46	0.26	-0.20	17.30	-1.66
Fargo Airport	0.32	-0.35	0.41	-0.28	0.48	-0.53	3.69	+1.51	1.33	-1.56	9.23	-0.82	0.80	-2.63	2.49	-0.40	2.28	+0.06	1.13	-0.56	2.01	+1.11	0.46	-0.26	18.63	-4.71
Forman	0.20	-0.25	0.54	+0.04	0.27	-0.53	2.29	+0.28	1.50	-1.45	5.11	+1.51	1.23	-1.65	0.47	-2.54	0.79	-1.28	1.26	-0.09	2.52	+1.95	0.30	-0.26	16.22	-4.27
Fullerton	0.15	-0.55	0.60	-0.11	0.50	-0.59	2.86	+0.72	1.06	-1.93	4.09	+0.18	3.18	+0.30	0.47	-2.07	0.77	-1.19	1.11	-0.22	2.60	+1.89	0.42	-0.35	17.81	-3.89
Gackle	0.14	-0.30	0.24	-0.21	0.04	-0.81	0.61	-0.93	0.21	-2.37	5.81	+2.34	1.05	-1.63	2.32	-0.08	2.04	+0.46	3.12	+2.16	1.10	+0.56	0.64	-0.01	17.12	-0.77
Grafton	0.45	-0.05	0.70	+0.13	0.32	-0.38	1.05	-0.29	0.72	-1.30	4.89	+1.64	2.56	+2.50	3.26	+0.74	3.46	+1.30	2.01	+0.87	1.41	+0.72	1.68	+1.10	25.16	+6.58
Grand Forks	0.51	-0.02	0.40	-0.16	0.29	-0.49	2.34	+0.68	1.45	-1.05	5.97	+2.69	2.13	-0.65	3.15	+0.53	1.77	-0.15	1.05	-0.31	2.08	+1.29	0.55	-0.07	21.69	+2.29
Grand Forks Airport	0.74	.....	0.45	.....	0.42	.....	2.02	.....	1.33	.....	6.38	.....	2.14	.....	3.03	.....	2.29	.....	1.02	.....	1.35	.....	0.44	.....	21.61	.....
Hankinson	0.15	-0.32	0.67	+0.13	0.34	-0.48	3.96	+1.95	1.86	-1.00	3.99	+0.41	1.40	-1.47	0.68	-2.07	1.36	-0.74	1.12	-0.25	2.09	+1.44	0.15	-0.37	17.77	-2.77
Hannah	0.27	-0.43	0.91	+0.32	0.67	-0.05	4.47	-0.65	0.24	-1.87	4.18	+0.77	1.65	-0.78	6.64	+4.27	2.05	-0.06	1.05	-0.02	1.05	+0.36	0.68	+0.09	19.86	+1.95
Hillsboro	0.22	-0.29	0.64	+0.09	0.35	-0.41	3.32	+1.44	1.90	-1.05	4.30	+0.88	1.78	-0.86	3.02	+0.27	2.11	+0.04	1.51	+0.17	1.88	+1.12	0.33	-0.31	21.36	+1.09
Jamestown	0.16	-0.39	0.89	+0.30	0.44	-0.46	1.45	-0.25	1.30	-1.47	4.38	+0.88	2.52	-0.18	1.76	-0.79	1.52	-0.15	2.20	+0.91	1.38	+0.71	0.24	-0.41	18.24	-1.30
Jamestown Airport	0.41	.....	0.82	.....	0.34	.....	1.88	.....	1.27	.....	4.05	.....	1.94	.....	1.90	.....	2.34	.....	2.50	.....	2.10	.....	0.56	.....	20.11	.....
Kensal	0.24	.....	0.42	.....	0.28	.....	0.62	.....	1.58	.....	5.41	.....	1.06	.....	2.00	.....	1.74	.....	3.18	.....	1.41	.....	0.41	.....	18.35	.....
Langdon	0.63	+0.02	0.90	+0.27	0.57	-0.21	0.48	-0.75	0.54	-1.45	5.66	+2.42	1.33	-1.17	2.60	+0.13	2.75	+0.52	2.01	+0.98	0.82	+0.09	0.86	+0.23	19.15	+1.08
Larimore	0.21	-0.39	0.34	-0.21	0.13	-0.68	1.33	-0.27	1.25	-1.48	3.25	-0.31	2.16	-0.78	3.56	+0.85	2.40	+0.35	1.69	+0.25	1.31	+0.49	0.40	-0.16	18.03	-2.34
Lisbon	0.15	-0.44	0.81	+0.22	0.25	-0.48	3.05	+1.12	1.63	-1.14	5.58	+1.68	1.24	-1.66	0.71	-2.19	0.89	-1.11	1.48	+0.24	1.52	+0.89	0.32	-0.19	17.63	-3.06
Mayville	0.09	-0.30	0.54	+0.10	0.21	-0.48	2.01	+0.46	1.09	-1.63	4.27	+0.90	2.56	-0.15	2.51	-0.04	2.98	+0.92	0.99	-0.27	2.66	+1.95	0.76	+0.24	20.67	+1.70
McHenry	0.25	-0.17	0.53	+0.08	0.14	-0.55	0.96	-0.41	1.19	-1.12	3.63	+0.16	0.98	-1.82	1.85	-0.47	2.09	+0.66	2.83	+1.78	1.08	+0.54	0.42	-0.07	15.95	-1.39
McLeod	0.07	-0.49	0.11	-0.45	0.37	-0.41	3.03	+1.04	1.43	-1.58	5.15	+1.32	1.20	-0.95	0.73	-1.98	1.14	-0.89	1.26	-0.13	1.21	+0.58	0.30	-0.16	16.68	-4.10
Munich	0.26	.....	1.07	.....	0.22	.....	0.58	.....	0.72	.....	4.32	.....	1.28	.....	3.54	.....	2.29	.....	1.00	.....	0.65	.....	0.54	.....	16.47	.....
Oakes	0.19	-0.28	0.41	-0.05	0.33	-0.47	2.25	+0.38	1.43	-1.28	4.76	+1.12	1.43	-1.42	0.93	-1.74	0.64	-1.12	1.47	+0.16	2.74	+2.18	0.37	-0.13	16.95	-2.65
Park River	0.28	-0.21	0.27	-0.15	0.51	-0.51	0.83	-0.49	0.35	-1.59	3.76	+0.50	3.82	+1.21	2.99	+0.69	3.02	+0.87	1.99	+0.81	1.27	+0.64	0.42	-0.09	19.15	+1.68
Pembina	0.28	-0.35	0.21	-0.41	0.22	-0.58	0.78	-0.48	0.63	-1.56	6.58	+3.39	2.57	-0.16	2.99	+0.70	3.89	+1.71	2.22	+1.02	0.95	+0.20	1.06	+0.44	22.38	+4.24
Petersburg	0.41	-0.03	0.50	0.00	0.10	-0.63	1.02	-0.37	1.28	-1.16	2.73	-0.77	0.99	-1.97	5.71	+3.35	3.18	+1.21	2.23	+1.06	1.09	+0.45	0.88	-0.10	19.62	+1.04
Sharon	0.30	-0.17	0.88	+0.40	0.25	-0.37	2.21	+0.78	1.23	-1.51	3.71	+1.10	2.00	-0.69	2.91	+0.54	2.22	+0.93	1.76	+1.04	0.56	+0.08	20.49	+1.49		
Valley City	0.51	-0.03	0.40	-0.19	0.45	-0.34	2.18	+0.45	1.57	-1.21	3.68	+0.13	0.68	-2.04	1.26	-1.28	1.25	-0.54	2.43	+1.11	1.85	+1.17	0.37	-0.21	16.68	-2.98
Wahpeton	0.07	-0.38	0.30	-0.17	0.40	-0.32	4.01	+1.93	1.76	-0.94	4.01	+0.43	2.56	-0.39	0.73	-2.14	1.40	-0.82	1.40	-0.04	1.80	+1.11	0.22	-0.28	18.66	-2.01
Middle Division																										
Ashley	0.21	-0.23	0.07	-0.38	0.23	-0.60	1.55	-0.06	0.96	-1.44	3.94	+0.52	4.98	+2.32	1.15	-1.29	1.71	+0.24	1.32	+0.26	0.85	+0.28	0.23	-0.27	17.18	-0.65
Belcourt	0.40	.....	0.65	.....	0.27	.....	0.83	.....	0.75	.....	5.42	.....	0.83	.....	4.14	.....	1.69	.....	0.66	.....	0.65	.....	0.65	.....	17.13	.....
Bisbee	0.37	-0.08	0.71	+0.35	0.56	-0.15	0.83	-0.36	1.79	-0.36	5.40	+2.04	1.21	-1.49	4.48	+2.13	1.69	0.00	0.99	0.00	1.28	+0.81	1.01	+0.58	20.32	+3.47
Bismarck	0.27	-0.11	0.31	-0.08	0.18	-0.69	1.00	-0.19	0.72	-1.51	6															

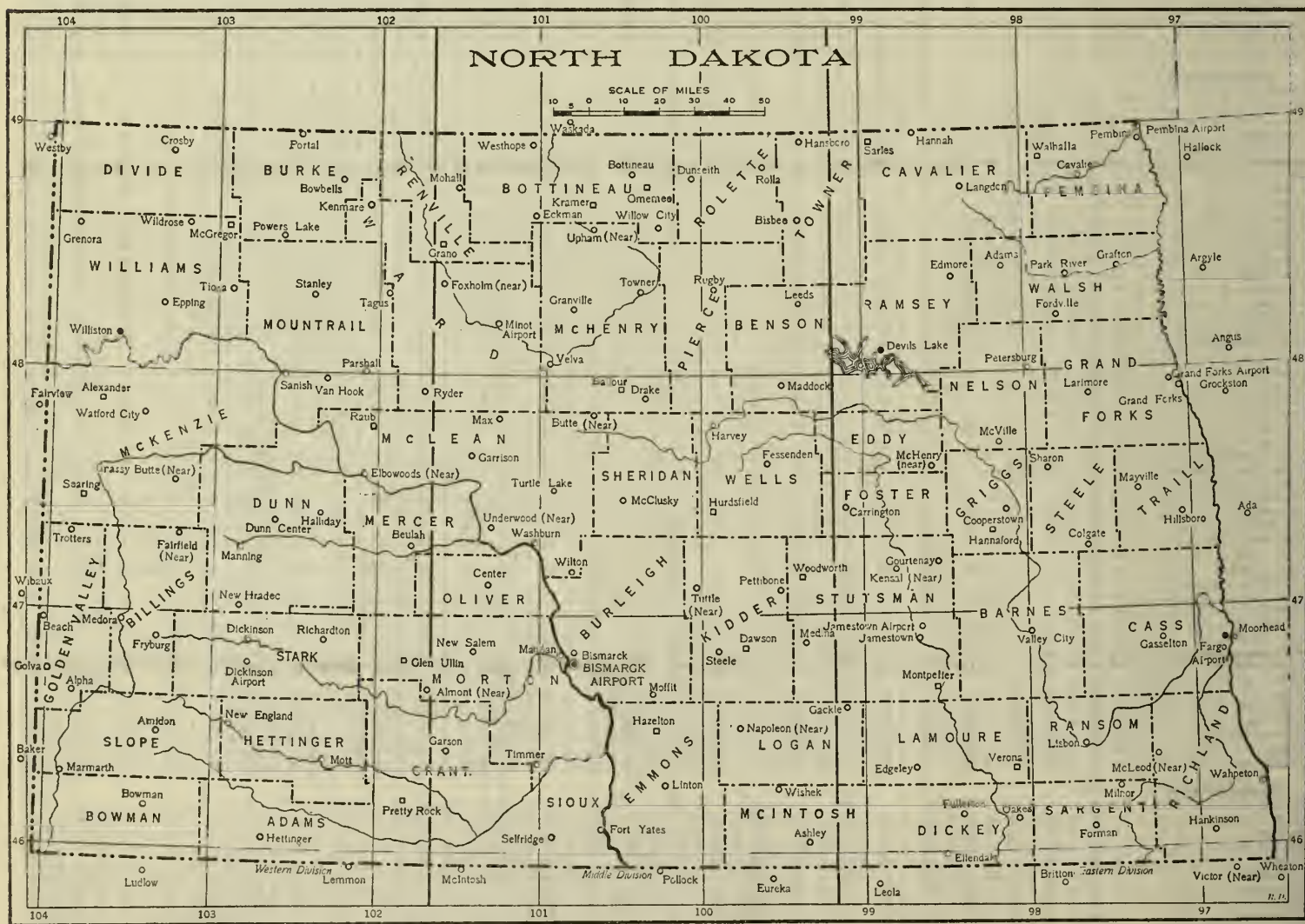
Monthly and Annual Precipitation for the Year 1947, with Departures from the Normal-Continued

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
<i>Western Division—Con.</i>																										
Epping	0.21	-0.21	0.20	-0.20	0.34	-0.23	0.83	-0.16	1.69	-0.45	5.11	+1.80	1.26	-0.79	2.86	+1.22	0.80	-0.49	0.40	-0.37	0.88	+0.45	0.25	-0.20	14.83	+0.37
Fairfield	0.15	-0.29	0.12	-0.30	0.46	-0.26	2.12	+0.90	1.10	-1.26	7.77	+4.04	2.30	+0.02	3.65	+2.07	0.79	-0.59	0.40	-0.44	0.58	+0.13	0.21	-0.25	19.65	+3.77
Golva	0.27	-0.19	0.18	-0.22	0.36	-0.39	1.56	+0.33	0.77	-1.49	6.91	+3.32	1.35	-0.45	1.90	+0.30	0.60	-0.67	0.63	-0.27	0.57	+0.11	0.29	-0.18	15.39	+0.25
Grenora	0.25	-0.19	0.16	-0.29	0.12	-0.56	1.20	+0.17	1.59	-0.63	4.12	+1.16	0.89	-0.95	3.64	+2.14	0.83	-0.40	0.19	-0.60	1.16	+0.61	0.52	0.00	14.67	+0.46
Halliday	0.13	.....	0.09	.....	0.29	.....	1.78	.....	1.07	.....	8.45	.....	0.79	.....	3.21	.....	0.62	.....	0.55	.....	0.97	.....	0.17	.....	18.12	.....
Hettinger	0.51	+0.15	0.11	-0.32	0.45	-0.21	1.22	+0.16	0.88	-1.40	8.29	+5.13	0.37	-1.91	1.78	+0.24	0.67	-0.63	1.40	+0.69	0.42	+0.02	0.13	-0.24	16.23	+1.68
Kenmare	0.63	+0.28	1.42	+1.03	0.41	-0.24	1.11	+0.19	1.23	-0.75	8.74	+5.85	1.12	-1.18	3.72	+1.81	0.94	-0.63	0.19	-0.77	1.06	+0.52	0.69	+0.26	21.26	+6.37
Marmarth	0.36	-0.06	0.46	+0.05	0.86	+0.13	1.23	+0.16	0.98	-1.31	7.73	+4.60	1.39	-0.52	3.38	+1.76	0.26	-1.00	0.77	-0.02	0.60	+0.23	0.32	-0.08	18.34	+3.94
Medora	0.21	-0.33	0.11	-0.28	0.46	-0.30	1.68	+0.53	0.58	-1.60	8.26	+4.84	0.52	-1.37	2.34	+1.32	1.10	-0.22	0.61	-0.17	0.78	+0.30	0.30	-0.18	17.45	+2.54
Mott	0.05	-0.44	0.13	-0.35	0.61	-0.25	1.33	+0.11	0.85	-1.41	5.25	+2.00	0.80	-1.33	1.04	-0.72	0.42	-0.95	1.37	+0.54	0.68	+0.22	0.40	-0.08	12.93	-2.66
New England	0.45	-0.01	0.48	-0.01	0.80	-0.01	1.53	+0.33	0.93	-1.24	8.51	+5.35	3.27	+1.14	1.92	+0.34	0.36	-1.01	0.40	-0.33	0.64	+0.19	0.24	-0.16	19.69	+4.58
New Hradec	0.35	.....	0.06	.....	0.60	.....	1.91	.....	0.72	.....	8.27	.....	1.55	.....	4.91	.....	0.48	.....	0.59	.....	0.40	.....	0.25	.....	19.89	.....
Parshall	0.46	+0.12	0.27	-0.12	0.41	-0.17	1.02	-0.05	0.98	-1.19	6.79	+3.30	1.29	-0.93	3.55	+1.71	0.83	-0.66	0.55	-0.20	0.72	+0.33	0.21	-0.20	17.08	+1.94
Portal	0.61	+0.21	0.56	+0.18	0.46	-0.15	0.63	-0.31	1.22	-0.85	7.42	+4.33	0.21	-1.86	4.50	+2.54	1.32	-0.14	0.32	-0.52	1.19	+0.67	1.07	+0.62	19.51	+4.72
Powers Lake	0.20	-0.32	0.60	+0.15	0.50	-0.20	0.72	-0.42	1.13	-1.02	6.68	+2.29	1.12	-1.16	4.08	+2.40	1.06	-0.23	0.35	-0.70	0.88	+0.39	0.59	+0.05	16.81	+1.23
Richardton	0.43	+0.05	0.22	-0.19	0.41	-0.31	1.89	+0.67	0.80	-1.66	10.09	+6.62	1.32	-1.14	1.59	-0.25	0.55	-0.77	0.83	+0.04	0.64	+0.12	0.40	-0.02	19.17	+3.16
Ryder	0.27	-0.06	0.29	-0.19	0.25	-0.29	0.74	-0.37	1.01	-1.08	6.15	+3.04	0.84	-1.39	3.81	+1.74	0.76	-0.76	0.33	-0.47	1.06	+0.53	0.18	-0.28	15.69	+0.42
Sanish	0.47	-0.01	0.18	-0.27	0.58	0.00	1.45	+0.33	1.34	-0.61	7.10	+3.73	2.66	+0.64	2.56	+0.96	0.79	-0.55	0.55	-0.22	0.66	+0.13	0.18	-0.27	18.52	+3.86
Stanley	0.83	.....	0.55	.....	0.44	.....	1.14	.....	1.10	.....	6.25	.....	1.80	.....	3.68	.....	0.82	.....	0.65	.....	0.69	.....	0.42	.....	18.37	.....
Tagus	0.34	-0.02	0.65	+0.23	0.29	-0.33	1.29	+0.14	1.40	-0.59	5.68	+2.63	1.06	-0.99	3.44	+1.66	1.54	+0.14	0.43	-0.35	1.05	+0.52	0.47	+0.05	17.64	+3.09
Tioga	0.29	-0.14	0.30	-0.07	0.40	-0.23	0.55	-0.43	1.43	-0.63	4.83	+1.77	2.00	-0.03	3.40	+1.65	0.75	-0.53	0.65	-0.16	1.08	+0.62	0.40	-0.04	16.08	+1.78
Trotters	0.44	+0.01	0.17	-0.21	0.38	-0.39	1.30	+0.25	0.58	-1.65	6.17	+2.84	3.30	+1.54	2.83	+1.29	0.32	-0.91	0.47	-0.33	0.48	+0.03	0.14	-0.26	16.58	+2.21
Van Hook	0.34	.....	0.11	.....	0.48	.....	0.78	.....	0.91	.....	6.83	.....	3.49	.....	3.45	.....	1.14	.....	0.25	.....	0.62	.....	0.23	.....	18.63	.....
Watford City	0.43	+0.01	0.09	-0.24	0.28	-0.41	2.18	+1.01	1.03	-0.96	7.48	+4.33	1.63	-0.37	3.13	+1.53	0.57	-0.74	0.78	-0.09	0.94	+0.45	0.37	-0.16	18.96	+4.26
Wildrose	0.21	-0.28	0.27	-0.19	0.37	-0.25	0.93	-0.03	1.47	-0.43	4.62	+1.52	1.14	-0.84	3.54	+1.73	1.20	+0.01	0.38	-0.42	1.36	+0.86	0.64	+0.12	16.13	+1.80
Williston	0.36	-0.18	0.03	-0.38	0.34	-0.35	1.59	+0.39	1.41	-0.65	5.03	+1.60	0.95	-0.94	5.06	+3.59	0.63	-0.46	0.55	-0.31	0.76	+0.18	0.24	-0.34	16.95	+2.15

The departures from normal precipitation for stations with 15 years or more of record are computed from a normal or "standard mean," adjusted to a uniform 35-year period, 1898-1932, inclusive.

T. Precipitation 0.005 inch or less.
ITALICS, Data interpolated.

CHART SHOWING METEOROLOGICAL STATIONS



○ Section Center

● Weather Bureau Office

○ Substation

□ Hydroclimatic Substation

[WBO, Minneapolis, 3-3-48-1800]

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MAR 1 1948

UNIVERSITY OF ILLINOIS

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LVII BISMARCK, N. D., JANUARY 1948 No. 1

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GENERAL SUMMARY

The temperatures over the state offered an unusual variation from the northeast portion where below normal temperatures prevailed for the month to the extreme southwest portion where the temperatures averaged 5 or more degrees above the normal. Generally temperatures were far in excess of the normal from the 2d through the 11th and again from the 28th through the 31st. The period from the 13th through the 27th was extremely cold. Temperatures of -30° or more were common over the east and middle sections on both the 17th and 23d. Precipitation was nearly normal over the west but light over the east and middle divisions. The 15th was stormy with blowing and drifting snow closing many secondary roads and leaving them heavy or blocked. Sunshine was near the seasonal normal. Because of the heavy snow cover ranging from a few inches in the extreme west to more than 15 inches over much of the east portion, much yard feeding of livestock was necessary. The ice harvest was delayed until the last ten days of the month. This activity was in full swing at the close of the month. The ice reached an average thickness of 26.0 inches at Bismarck.—M.S.C.

TEMPERATURE

The mean temperature for the state was 9.3°, or 2.2° above the 1892-1948 average for January. The mean temperature for the eastern division was 4.5°; for the middle division, 8.9°; and for the western division, 14.6°. The highest mean temperature was 20.4° at Golva, and the lowest, -0.4° at Pembina, making a range in mean temperature of 20.8°. The absolute range was 101°, from 59° at Golva on the 5th, to -42° at Willow City on the 17th and 23d. The average daily excess in temperature for the state since January 1, 1948, is 2.2°.

PRECIPITATION

The average precipitation for the state was 0.40 inch, or 0.07 inch less than the 1892-1948 average for January. In the eastern division the average amount was 0.39 inch; in the middle division, 0.33 inch; and in the western division, 0.48 inch. The greatest monthly amount reported was 0.99 inch at Amidon; the least was 0.06 inch at Medina. The greatest amount recorded in any 24 consecutive hours was 0.58 inch at Fargo Airport on the 14-15th. The accumulated deficiency in precipitation for the state since January 1, 1948, is 0.07 inch. The average snowfall was 5.0 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.90	27	29.58	19	11.4	50	nw.	15	87	89	78	85	44	1669
Devils Lake...	30.84	27	29.43	19	9.6	33	n.	15	85	85	77	82	47	1838
Fargo.....	30.86	27	29.44	20	13.5	42	n.	15	85	87	80	85	49	1923
Williston.....	30.87	27	29.44	2	7.3	28	nw.	15	88	89	80	82	51	1550

† And other dates.

COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	3.3	58	-52	0.81	0.41	0.25	0.32	2.8	4	15	8	8
1893...	0.8	52	-48	0.93	0.94	1.11	0.99	8.4	7	11	11	9
1894...	0.6	60	-47	0.88	0.40	0.38	0.39	3.6	4	13	9	7
1895...	-2.9	42	-46	0.53	0.69	0.47	0.56	5.5	5	16	8	9
1896...	5.3	58	-42	0.75	0.77	0.80	0.77	6.6	6	9	9	13
1897...	3.6	49	-38	0.91	0.64	0.76	0.77	7.5	5	11	9	11
1898...	14.6	69	-32	0.14	0.12	0.07	0.11	1.1	2	15	8	8
1899...	5.2	55	-41	0.29	0.20	0.26	0.25	2.4	3	13	9	9
1900...	15.4	70	-30	0.27	0.27	0.12	0.22	2.0	3	15	9	7
1901...	7.7	68	-39	0.29	0.29	0.26	0.28	3.0	4	14	8	9
1902...	12.7	51	-40	0.17	0.03	0.23	0.14	1.4	2	17	7	10
1903...	9.4	56	-37	0.72	0.58	0.68	0.66	6.7	5	13	8	7
1904...	3.6	50	-52	0.41	0.36	0.42	0.40	4.0	5	15	6	10
1905...	0.9	48	-40	0.26	0.30	0.41	0.32	2.9	3	15	8	8
1906...	12.2	60	-38	0.75	0.72	0.61	0.69	6.9	4	14	6	11
1907...	-6.2	45	-45	1.77	1.13	1.05	1.32	14.5	8	12	8	11
1908...	17.0	70	-41	0.21	0.16	0.34	0.24	1.9	2	17	8	6
1909...	3.5	53	-48	0.60	0.32	0.37	0.43	4.3	4	14	8	9
1910...	9.4	49	-35	0.30	0.21	0.59	0.37	4.1	3	16	8	7
1911...	-1.0	56	-43	0.86	0.96	0.69	0.84	8.5	6	11	8	12
1912...	-4.6	63	-52	0.34	0.34	0.36	0.35	3.6	4	16	6	9
1913...	3.2	60	-54	0.51	0.40	0.43	0.45	4.6	5	12	9	10
1914...	14.8	62	-38	0.56	0.48	0.40	0.48	4.9	4	12	8	11
1915...	5.8	51	-48	0.39	0.24	0.25	0.29	3.4	3	12	9	10
1916...	-6.4	49	-56	1.58	1.24	1.26	1.36	15.1	6	13	8	10
1917...	1.7	47	-46	0.82	0.69	0.65	0.72	8.6	5	13	8	10
1918...	0.5	48	-44	0.41	0.43	0.58	0.47	5.0	5	12	8	11
1919...	18.7	66	-44	0.24	0.21	0.10	0.18	1.7	2	17	8	6
1920...	2.7	49	-44	1.26	0.96	0.68	0.97	10.0	5	10	9	12
1921...	15.9	52	-31	0.29	0.20	0.22	0.24	2.5	2	13	9	9
1922...	7.0	55	-46	0.68	0.36	0.42	0.49	5.2	5	12	9	10
1923...	10.1	56	-35	0.59	0.43	0.54	0.52	6.0	5	9	9	13
1924...	2.6	61	-42	0.30	0.20	0.18	0.23	2.5	3	14	9	8
1925...	8.6	52	-35	0.33	0.18	0.22	0.24	2.5	3	11	10	10
1926...	16.3	55	-30	0.31	0.34	0.49	0.38	4.1	4	13	8	10
1927...	10.1	60	-44	0.50	0.36	0.41	0.42	4.3	4	14	8	9
1928...	13.0	50	-41	0.21	0.19	0.19	0.20	2.3	3	14	9	8
1929...	-4.8	42	-42	0.76	0.48	0.63	0.62	9.2	6	13	8	10
1930...	-1.9	41	-43	0.26	0.22	0.40	0.29	2.7	4	12	9	10
1931...	21.4	68	-31	0.15	0.15	0.14	0.15	1.4	2	15	8	8
1932...	9.5	50	-34	0.47	0.62	0.59	0.56	6.3	4	12	7	12
1933...	11.8	53	-30	0.92	0.70	0.79	0.80	10.0	7	12	7	12
1934...	15.8	54	-36	0.29	0.14	0.17	0.20	2.0	3	11	9	11
1935...	3.3	60	-44	0.55	0.29	0.39	0.41	4.9	6	8	10	13
1936...	-5.8	43	-44	0.51	0.48	0.69	0.56	6.9	7	11	8	12
1937...	-8.3	38	-44	1.04	0.55	0.42	0.67	9.0	6	13	8	10
1938...	9.5	50	-40	0.36	0.42	0.67	0.48	6.1	6	10	9	12
1939...	15.0	55	-32	0.56	0.32	0.54	0.47	6.0	6	8	10	13
1940...	3.4	48	-39	0.10	0.11	0.10	0.10	1.4	3	13	9	9
1941...	11.0	53	-33	0.80	0.56	0.25	0.54	6.3	5	10	7	14
1942...	18.3	60	-35	0.09	0.08	0.10	0.09	1.0	2	16	7	8
1943...	-1.4	45	-44	0.42	0.74	1.02	0.73	9.4	7	10	8	13
1944...	21.8	61	-26	0.26	0.33	0.51	0.37	4.8	3	16	8	7
1945...	12.7	51	-31	0.40	0.37	0.45	0.41	5.6	5	8	8	15
1946...	11.2	56	-33	0.27	0.23	0.10	0.20	2.9	4	10	11	10
1947...	16.0	57	-37	0.31	0.40	0.33	0.35	4.4	4	8	11	12
1948...	9.3	59	-42	0.39	0.33	0.48	0.40	5.0	6	11	11	9
Period	7.1	70	-56	0.51	0.43	0.46	0.47	5.1	4	13	8	10

Climatological Data for January 1948

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	5	3.6		36	8	-37	23	0.47		0.15	15 1/2	7.0	5	17	10	4	nw.	Albert Thoren.
Carrington	Foster	1,579	51	9.4	+2.7	36	21	-32	17	0.37	-0.05	0.15	25	4.9	4					Soo Line Agent.
Casselton	Cass	934	53																	Ashton Lockhart
Cavalier	Pembina	894	41	1.0	-0.4	32	7	-33	22 1/2	0.46	-0.21	0.22	15	6.1	8	10	10	11	se.	City Light & Power Co.
Colgate	Steele	1,180	15							0.20	-0.28	0.20	15	2.5	1	10	10	11	sw.	O. M. Jensen.
Cooperstown	Griggs	1,428	52	4.6	+0.3	34	7	-36	23	0.52	+0.01	0.42	14	6.2	2	13	3	15	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	18							0.13	-0.48	0.08	16	1.5	3	6	21	4	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	73	5.6	+3.8	35	8	-30	23	0.37	-0.10	0.22	14	6.6	7	9	10	12	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	48	9.6	+0.8	38	8	-29	23	0.52	+0.03	0.18	24-25	6.1	10	3	17	11	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	25	3.0	+2.8	36	3	-37	23	0.47	-0.02	0.16	14-15	5.9	5	16	9	6	nw.	Mike Davis.
Ellendale	Dickey	1,457	50	7.2	-2.8	42	8	-31	23	0.21	-0.25	0.10	14-15	2.9	5	5	8	18	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	68	3.0	-0.8	37	8	-34	23	0.77	+0.10	0.58	14-15	7.3	11	9	5	17	sw.	U. S. Weather Bureau.
Forman	Sargent	1,249	57	6.6	-1.0	40	8	-34	23	0.63	+0.18	0.48	20	6.5	4	15	10	6	sw.	Art Waterman.
Fullerton	Dickey	1,439	51	8.4	-0.7	40	8	-30	23	0.38	-0.32	0.08	8 1/2	3.4	7	6	15	10	sw.	F. O. Akin.
Gackle	Logan	1,951	18																	Tony Martin.
Grafton	Walsh	827	57	2.3	-0.3	35	7	-37	23	0.47	-0.30	0.30	15	5.5	4	18	8	5	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	58	1.8	-1.8	35	8	-35	23	0.37	-0.16	0.22	14-15	5.1	7	8	8	15	nw.	University of N. Dak.
Grand Forks Aprt., 2 1/2 mi. W	Grand Forks	834	8	1.6		34	8	-35	23	0.60		0.32	14-15	6.3	8	9	6	16	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	20	5.2	-2.7	40	8	-34	23	0.17	-0.30	0.06	12	3.0	6	16	4	11	nw.	Soo Line Agent.
Hannah	Cavalier	1,558	55	2.7	+3.9	31	3	-37	23	0.35	-0.35	0.17	18-19	6.4	4	8	15	8	nw.	A. E. Prior.
Hillsboro	Trail	901	43	3.3	-1.6	40	8	-38	23	0.22	-0.29	0.07	14	2.7	8	8	14	9	sw.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	57	8.3	+1.2	38	8	-30	23	0.27	-0.28	0.07	19	3.9	7	8	12	11	nw.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	8	7.2		38	8	-33	23	0.49		0.11	19-20	5.0	13	6	9	16	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	8	6.6		38	8	-35	23	0.25		0.10	14	5.0	6	7	9	15	nw.	U. S. Wildlife Refuge.
LaMoure	LaMoure	1,440	2	6.6		38	7 1/2	-31	23	0.32		0.15	9	4.7	4	9	16	6	se.	Andrew Remick.
Langdon, 1 1/2 mile SE	Cavalier	1,615	53	2.6	+3.0	38	3	-40	23	0.41	-0.20	0.24	15	4.0	6	17	6	8	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	56	3.4	-0.4	36	8	-34	23	0.30	-0.30			4.0	7	15	9	3	sw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	45	9.6	+2.0	43	8	-38	23	0.30	-0.29	0.22	15	4.2	3	12	15	4	nw.	Robert M. Jodsaas.
Mayville	Trail	975	53	4.0	-2.0	37	8	-37	23	0.92	-0.53	0.54	15	10.2	11	10	16	5	sw.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	26	3.6	+2.1	37	3	-34	23	0.28	-0.14	0.19	14-15	2.7	5	8	11	12	nw.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	37	5.2	-3.1	40	8	-38	23	0.45	-0.11	0.34	15	5.3	3	19	9	3	nw.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,594	1	3.0		35	7	-35	23	0.21		0.04	14 1/2	3.9	8	14	8	9	nw.	Harold Feldner.
Oakes	Dickey	1,318	20	3.7	-5.2	40	8	-36	23	0.27	-0.20	0.07	9 1/2	2.7	5	17	5	9	sw.	C. M. Hagen.
Park River	Walsh	998	45	3.2	+0.3	35	7	-33	23	0.23	-0.26	0.11	20	2.9	3	18	6	7	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	75	0.4	+2.0	30	5 1/2	-37	23	0.80	+0.17	0.44	14-15	7.6	12	10	5	16	sw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	18	3.0		35	8	-31	23	0.34	-0.10	0.22	14	4.5	2	15	10	6	nw.	T. C. Overland.
Sharon	Steele	1,516	25	3.4	-0.1	35	7 1/2	-34	23	0.28	-0.19	0.16	19-20	4.2	6	7	11	13	nw.	Hugh Lyon.
Valley City	Barnes	1,229	44	7.6	+1.5	40	8	-33	23	0.30	-0.24	0.11	14	5.1	5	11	7	13	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	57	4.3	-4.4	40	8	-34	23	0.33	-0.12	0.06	15	4.8	8	13	15	3	nw.	State School of Science.
Average for Eastern Division				4.5	-0.4	48	8	-40	23	0.39	-0.12	0.58	14-15	4.9	6	11	10	10	nw.	
Middle Division																				
Ashley, 1 mile SE	McIntosh	2,025	53	8.2	-0.5	40	8	-27	23	0.35	-0.09	0.10	7-8	3.7	8	9	14	8	sw.	Raymond R. Spitzer.
Belcourt	Rolette	1,900	4	4.9		40	7	-38	23	0.27		0.15	14	3.8	6	5	13	13	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	46							0.37	-0.08	0.37	14-15	4.0	1					Robert L. Peterson.
Bismarck	Burleigh	1,670	74	12.2	+4.2	42	8	-24	27	0.34	-0.04	0.12	21-22	5.8	10	6	8	17	nw.	U. S. Weather Bureau.
Bismarck Airport, 2 1/2 mi. SE.	Burleigh	1,650	9	11.3	+5.0	41	8	-26	27	0.30	-0.15	0.11	21-22	6.4	10	6	8	17	nw.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	57	5.6	+4.2	37	7	-35	17	0.48	+0.07	0.29	14-15	7.4	7	10	14	7	nw.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	24																	R. L. Williams.
Carson, 2 1/2 miles SW	Grant	2,500	37	15.4	+5.3	45	2 1/2	-30	27	0.44	+0.08	0.20	21-22	5.3	5	8	13	10	nw.	J. W. Evans.
Center	Oliver	2,100	11	12.8		46	7	-29	27	0.28		0.15	21	3.8	5	6	16	9	nw.	Fred L. Heinz.
Drake	McHenry	1,634	19	6.5	+1.0	40	2	-29	23 1/2	0.15	-0.24	0.09	15	2.2	5	14	15	2	nw.	Geo. A. Paulus.
Dunsmuir, 2 miles NNE	Rolette	1,622	53	5.8	+3.0	40	7	-33	17 1/2	0.58	+0.15	0.22	14	7.5	3	19	5	7	n.	State Tuberculosis San.
Eckman	Bottineau	1,500	43	3.2	+0.1	37	2	-38	17 1/2	0.45	+0.09	0.27	14	4.8	5	6	19	6	nw.	E. R. Sherman.
Fessenden	Wells	1,610	37	8.0	+3.3	37	8	-32	23	0.38	-0.11	0.12	19	5.3	4	15	14	2	w.	John V. Zuber.
Fort Yates	Sioux	1,670	49	15.6	+6.0	44	8	-25	23 1/2	0.55	+0.36	0.25	21-22	9.4	5	15	6	10	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	28	11.6	+4.8	39	7 1/2	-28	17	0.23	-0.21	0.20	17-18	2.9	3	8	4	19	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	72	11.0	+3.1	41	2	-26	27	0.47	+0.10	0.20	21-22	5.8	8	7	7	17	nw.	Mae H. Vorachek.
Granville	McHenry	1,504	42	8.7	+3.6	40	2	-30	17	0.33	-0.05	0.10	15	3.4	6	18	9	4	nw.	Fred Roble.
Hansboro	Towner	1,597	41	4.2	+3.6	34	7	-34	23	0.24	-0.37	0.19	14-15	3.0	5	8	16	7	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	46							0.22	-0.26	0.14	20	3.0	2	14	9	8	nw.	H. J. Reynolds.
Leeds	Benson	1,515	8	6.0		33	3 1/2	-35	23	0.30				5.0		2	27	2	nw.	John Duhmaga.
Linton	Emmons	1,711	32																	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	34	6.6	+2.0	35	8	-37	23	0.42	0.00	0.20	14	6.0	4	7	13	11	nw.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	35	11.5	+															

Climatological Data for January 1948—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division—Con.																				
Dickinson Airpt., 5½ mi. S.	Stark	2,587	8	16.6	.....	48	2	-26	27	0.31	.....	0.22	21-22	3.0	7	9	9	13	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	50	15.0	+2.8	48	2	-26	27	0.49	+0.13	0.22	22	7.0	4	10	7	14	nw.	O. T. Evenson,
Elbowoods	McLean	2,082	56	13.9	+5.3	48	2	-32	27	0.34	+0.01	0.25	22	6.1	5	14	7	10	nw.	H. W. Case,
Epping	Williams	2,224	40	13.0	+7.8	45	2	-27	27	0.44	+0.02	0.15	21	6.1	9	9	8	14	nw.	T. Beachler,
Fairfield, 9¼ miles N.	Billings	2,650	20	.....	.....	.....	.....	.....	.....	0.33	-0.11	0.14	25	3.4	7	13	6	12	nw.	Mrs. Edith Larson,
Golva, 1 mile E.	Golden Valley	2,781	8	20.4	+8.3	59	5	-20	27	0.96	+0.50	0.46	21	5.9	6	13	10	8	nw.	Chester K. Fuda,
Grenora	Williams	2,114	40	14.6	+9.7	43	2	-22	27	0.15	-0.29	0.10	3	1.8	2	14	9	8	nw.	L. D. Nielson,
Halliday	Dunn	2,073	7	.....	.....	.....	.....	.....	.....	0.32	.....	0.15	21	5.4	4	9	13	9	nw.	John Kisse,
Hettinger	Adams	2,675	42	18.0	+4.3	52	7	-32	27	0.52	+0.16	0.40	21-22	6.0	3	12	15	4	nw.	Edgar Martin,
Kenmare	Ward	1,739	17	11.1	+5.3	39	2	-23	22†	0.42	+0.07	0.12	21-22	6.0	8	13	5	13	nw.	Theo. E. Eckberg,
Marmarth	Slope	2,714	40	19.3	+5.8	53	7	-25	27	0.76	+0.34	0.27	8	6.0	6	12	7	12	nw.	S. P. Grane,
Medora, 1½ mi. W.	Billings	2,271	34	18.0	+7.6	53	2	-40	27	0.54	0.00	0.40	23	6.3	7	18	6	7	w.	Harry Roberts,
Mott	Hettinger	2,424	42	17.8	+4.2	48	2	-31	27	0.75	+0.26	0.50	21-22	5.5	4	16	9	6	nw.	Northern Pacific Agent,
New England	Hettinger	2,621	57	16.4	+2.9	51	7	-32	27	0.76	+0.30	0.40	21-22	5.8	6	12	13	6	nw.	Alfred Hasel,
Parshall	Mountrail	1,929	34	11.4	+5.1	45	2	-31	27	0.28	-0.06	0.14	21-22	4.7	8	12	2	2	nw.	C. E. Schubert,
Portal	Burke	1,954	35	7.8	+4.8	38	2	-30	27	0.30	-0.10	0.26	21-22	4.5	2	9	13	9	nw.	U. S. Customs Service,
Powers Lake	Burke	2,205	44	10.8	+2.7	39	7†	-29	17	0.44	-0.68	0.21	21	5.4	5	5	10	16	nw.	E. J. Lewis,
Richardton, 1¼ miles N.	Stark	2,467	33	16.4	+5.3	47	2	-25	27	0.64	+0.26	0.25	21-22	7.6	7	13	11	7	nw.	Assumption Abbey,
Ryder	Ward	2,108	20	.....	.....	.....	.....	.....	.....	0.33	0.00	0.15	18-19	4.3	4	8	7	16	nw.	S. C. Schellenbaum,
Sanish	Mountrail	1,535	23	10.2	+5.1	47	2	-37	28	0.49	+0.01	0.15	22	6.1	10	7	10	14	w.	H. J. Bugge,
Stanley	Mountrail	2,258	11	9.6	.....	38	6	-27	17†	0.23	.....	0.23	21-22	3.5	1	4	8	19	nw.	Leroy Edwards,
Tazewell	Mountrail	2,179	20	.....	.....	.....	.....	.....	.....	0.27	-0.09	0.10	21-22	2.6	7	7	13	11	nw.	Geo. N. Pilgard,
Tioga	Williams	2,279	20	.....	.....	.....	.....	.....	.....	0.35	-0.08	0.20	22	4.5	2	12	4	15	sw.	L. A. Simon,
Trotters	Golden Valley	.....	23	.....	.....	.....	.....	.....	.....	0.32	-0.11	0.22	21	5.4	5	5	20	6	nw.	Walter Grunewald,
Van Hook	Mountrail	1,864	8	13.2	.....	48	2	-29	27	0.37	.....	0.19	21-22	7.1	7	11	10	10	nw.	H. Glenn Sims,
Watford City	McKenzie	2,084	36	16.2	+6.4	51	2	-27	27	0.64	+0.17	0.18	3	8.9	6	9	16	6	w.	J. C. Zeller,
Willrose	Williams	2,258	19	.....	.....	.....	.....	.....	.....	0.38	-0.11	0.20	23	3.9	3	11	6	14	w.	Jonathan Winkler,
Williston	Williams	1,878	70	15.1	+8.7	47	2	-25	27	0.52	-0.02	0.29	21-22	7.0	12	7	11	13	w.	U. S. Weather Bureau,
Average for Western Division				14.6	+5.3	59	5	-40	27	0.48	+0.02	0.50	21-22	5.5	6	11	10	10	nw.	
Average for the State				9.3	+2.2	59	5	-42	17†	0.40	-0.07	0.58	14-15	5.0	6	11	11	9	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for January 1948																																						
Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean					
Ashley	Maximum...	16	29	33	33	30	31	39	40	27	29	32	11	8	31	0	-3	12	12	33	18	4	-6	11	16	17	0	-1	26	26	21	20	19.2					
	Minimum...	-16	-6	10	14	19	8	8	27	24	17	20	3	-1	-9	-1	-13	-20	-18	-11	-1	-1	-18	-27	-14	-7	-18	-24	-25	-2	-1	0	-2.7					
Bismarek Airport ...	Maximum...	20	35	37	35	35	31	36	41	28	28	34	13	13	36	30	2	8	14	35	26	15	-2	12	16	18	4	4	31	32	21	33	23.3					
	Minimum...	-8	7	13	11	12	6	17	28	19	22	12	4	-7	-10	-5	-13	-23	-9	-12	-2	-2	-25	-19	5	-12	-22	-26	-1	-1	-2	6	-0.7					
Bottineau	Maximum...	15	30	35	28	30	24	37	34	28	25	25	20	0	14	29	-7	-3	11	19	32	14	-3	-3	8	14	0	-5	25	20	18	27	17.5					
	Minimum...	-7	10	14	8	8	-5	21	14	7	5	8	4	-12	-20	-12	-22	-35	-7	-27	-2	-19	-26	-26	-4	-8	-22	-32	-8	-5	3	11	-6.3					
Carson	Maximum...	32	45	40	35	40	38	45	42	30	28	34	20	10	42	33	6	17	17	36	33	20	5	17	18	20	5	3	30	37	30	31	27.1					
	Minimum...	1	16	23	14	18	16	30	28	20	14	18	5	-5	-7	-6	-10	-12	-2	8	14	-1	-16	-16	8	-8	-21	-30	-4	4	10	14	3.6					
Crosby/	Maximum...	26	35	35	33	28	26	35	32	27	25	17	5	-1	34	-7	-6	14	14	35	21	6	5	16	16	3	0	16	-28	-25	8	10	13	-1.8				
	Minimum...	-16	13	17	5	5	3	20	25	22	14	7	-2	-6	-14	-12	-17	-23	-17	-11	-7	-3	-18	-19	3	0	-16	-28	-25	8	10	13	-1.8					
Devils Lake	Maximum...	13	31	32	27	32	23	31	35	21	26	26	8	1	30	30	-9	-2	9	32	31	0	-15	0	4	10	-3	4	26	17	18	30	16.7					
	Minimum...	-8	9	16	16	8	4	22	21	6	4	2	-9	-12	-14	-16	-22	-27	-18	-21	0	-15	-27	-30	-7	-18	-22	-29	4	1	0	13	-5.5					
Dickinson Airport...	Maximum...	40	48	41	42	39	45	46	40	32	37	33	16	15	42	28	6	18	17	37	28	13	1	26	16	15	6	11	29	33	32	30	27.8					
	Minimum...	7	23	23	15	16	18	30	26	17	15	11	5	-3	3	-7	-9	-9	-3	3	8	0	-12	-2	10	-15	-23	-26	10	9	11	14	5.3					
Dunn Center/	Maximum...	41	48	40	38	40	42	36	40	31	35	32	18	14	41	28	5	18	17	38	34	21	5	25	19	16	8	10	32	37	35	33	28.0					
	Minimum...	8	3	16	6	11	5	18	26	18	10	12	4	-2	-6	-8	-14	-20	-4	-8	12	1	-13	-10	13	-8	-15	-26	-3	9	3	12	2.1					
Fargo Airport	Maximum...	2	16	24	30	31	21	32	37	21	24	31	9	1	23	25	-6	-9	6	28	32	1	-16	1	11	9	-8	-8	21	16	19	22	14.4					
	Minimum...	-24	-8	9	2	12	-2	20	21	-8	8	9	-6	-14	-19	-20	-21	-28	-9	-17	1	-16	-30	-34	-5	-11	-22	-28	-10	-5	-3	11	-8.5					
Fessenden	Maximum...	4	31	36	32	30	29	35	37	28	26	21	16	5	23	17	-5	0	11	29	33	27	-3	3	8	16	2	1	29	24	24	32	19.4					
	Minimum...	-9	8	20	16	10	2	24	26	19	8	6	3	-8	-14	-10	-20	-28	-5	-19	2	-13	-27	-32	-2	9	-22	-27	-6	2	0	11	-3.3					
Fullerton	Maximum...	6	18	34	34	35	27	39	40	32	26	29	29	12	17	28	0	-2	12	18	35	19	0	-3	18	18	5	-3	29	25	19	24	20.0					
	Minimum...	-18	-8	8	19	21	4	13	27	15	10	16	0	-1	-14	-17	-14	-24	-11	-17	10	-5	-20	-30	-3	-4	-17	-23	-14	3	-1	0	3.1					
Garrison	Maximum...	26	41	33	30	30	33	36	38	28	26	27	11	8	34	31	-3	9	13	33	21	13	-3	14	14	17	3	6	28	30	28	32	22.2					
	Minimum...	3	15	15	8	12	5	23	24	20	19	11	2	-9	-12	-10	-18	-22	-8	-10	8	-10	-21	-21	6	-14	-18	-26	6	9	5	11	-0.1					
Golva	Maximum...	40	48	40	42	59	53	55	49	38	38	35	27	15	41	28	7	24	33	37	35	37	32	28	17	14	7	10	33	42	40	32	38.1					
	Minimum...	7	22	25	17	15	17	35	29	12	14	13	9	2	4	-5	-11	-13	3	4	13	0	-4	2	12	-9	-13	-20	9	17	12	20	7.7					
Grafton	Maximum...	0	20	25	26	32	23	35	30	26	10	21	20	7	-3	18	-4	-5	6	7	20	1	-10	-14	5	5	-1	-3	31	29	15	30	13.2					
	Minimum...	-19	-5	12	9	18	-1	8	22	-6	-18	9	-5	-3	-20	-15	-18	-31	-19	-26	0	-12	-26	-37	-27	-3	-21	-27	-25	-5	12	-8.6						
Grand Forks Airport.	Maximum...	3	16	26	29	32	15	32	34	21	23	26	4	1	18	17	-5	-12	5	25	24	-2	-19	-3	9	5	-6	-6	29	16	18	21	12.8					
	Minimum...	-20	-6	13	11	7	-3	15	19	-15	14	2	-6	-16	-21	-22	-30	-12	-22	-3	-21	-32	-35	-4	-11	-23	-28	-7	-4	-3	12	-9.7						
Jamestown Airport...	Maximum...	13	29	35	32	32	21	35	38	24	27	27	10	5	31	30	-5	-1	10	34	26	7	-11	2	8	14	0	2	28	27	16	30	18.6					
	Minimum...	-18	-2	14	17	11	1	20	24	10	11	7	-5	-10	-16	-10	-20	-25	-8	-20	6	-12	-29	-33	-3	-13	-20	-24	3	0	0	6	-4.3					
Kenmare/	Maximum...	30	39	34	35	28	38	38	35	24	26	19	8	9	34	2	5	11	14	34	22	0	1	18	15	10	4	24	31	38	29	30	21.5					
	Minimum...	-7	12	18	13	16	9	21	27	19	13	10	2	-4	-10	-8	-16	-20	-15	-7	6	-11	-23	-28	0	-4	-12	-17	-6	16	20	0.5						
Langdon	Maximum...	10	18	33	30	28	23	37	35	22	20	25	14	-1	8	18	-1	-10	8	10	20	0	-10	-6	3	5	-5	-6	31	21	18	28	13.9					
	Minimum...	-10	-6	13	12	16	-7	16	18	-3	-12	-12	-8	-16	-21	-16	-23	-34	-15	-25	-5	-14	-34	-40	-12	-10	-27	-33	-10	-5	1	12	-8.8					
Marimath	Maximum...	32	42	39	44	45	46	53	42	37	40	35	20	20	45	36	9	24	24	37	37	40	37	31	24	14	9	11	32	37	38	32	32.6					
	Minimum...	10	15	20	10	14	12	26	31	24	10	15	9	5	3	2	-7	-8	-9	-13	24	11	0	8	14	9	-16	-25	-2	0	-2	6.0						
Minot Airport	Maximum...	27	39	33	32	32	38	36	39	25	28	25	11	7	33	29	-8	9	10	34	18	7	-8	13	12	18	0	12	28	32	30	29	21.6					
	Minimum...	6	23	18	13	11	10	27	20	14	18	8	1	-8	-9	-11	-17	-22	-9	-12	6	-10	-22	-17	-1	-14	-20	-23	13	10	13	20	1.2					
Nott	Maximum...	38	48	42	38	42	42	48	42	36	35	36	34	18	44	35	12	18	18	35	26	22	11	28	26	15	14	9	30	35	33	35	30.8					
	Minimum...	8	12	20	11	16	11	24	33	22	8	20	7	6	-5	-5	-8	-13	-4	-7	15	-1	-12	-9	12	0	-10	-31	-5	2	10	5	4.8					
Pembina Airport	Maximum...	5	16	22	27	30	18	27	30	11	22	25	2	1	7	-5	-7	-11	3	15	14	-4	-22	-13	3	2	-9	-4	28	15	17	25	9.7					
	Minimum...	-15	0	14	10	12	-4	14	11	20	-24	-3	-9	-12	-25	-18	-19	-35	-13	-28	-6	-25	-33	-37	-13	-13	-22	-27	-7	-1	-1	15	-10.6					
Sharon	Maximum...	8	24	30	26	32	25	35	35	24	20	27	15	2	10	-28	-10	-13	-7	20	32	5	-13	-13	8	-8	-5	9	27	20	15	27	14.4					
	Minimum...	-20	0	12	12	17	0	15	24	-4	-6	15	-6	-10	-19	-15	-20	-31	-16	-23	-2	-13	-25	-34	-15	-10	-27	-30	-10	-3	0	6	-7.7					
Steele	Maximum...	14	29	34	34	32	34	36	40	28	27	30	15	15	12	-6	-4	5	11	28	34	16	-3	3	12	15	1	-5	30	26	25	31	19.3					
	Minimum...	-12	-6	10	12	17	3	21	26	17	17	13	-1	-10	-9	-9	-21	-27	-7	-17	-5	-11	-24	-31	0	-10	-21	-31	-12	0	7	-3.5						
Valley City	Maximum...	6	21	33	33	30	25	38	40	33	23	29	26	10	11	31	-5	8	8	15	34	17	-3	5	9	14	7	-2	30	27	20	26	19.1					
	Minimum...	-22	-2	14	23	14	3	17	27	9	3	21	-6	-6	-16	-8	-15	-25	-12	-16	1	-5	-21	-33	-8	-2	-21	-24	-11	-1	-5	6	3.8					
Wahpeton	Maximum...	2	15	25	30	32	23	33	40	34	18	31	29	3	6	31	-5	-7	7	15	32	6	-8	-6	11	13	3	6	21	18	20	23	15.8					
	Minimum...	-25	-12	11	5	22	-2	13	21	7	-4	13	-8	-8	-21	-12	-23	-23	-17	-16	6	-8	-26	-34	-10	-3	-28	-29	-15	-5	-6	9	-7.2					
Williston	Maximum...	35	47	35	26	34	44	37	39	28	36	26																										

Daily Precipitation for January 1948

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
<i>Eastern Division</i>																																		
Carrington ²	James	.06															.10		.06							.15							0.37	
Cassellton	Red.																																0.52	
Cooperstown	Sheyenne														.42							.10											0.13	
Courtenay	James																																0.37	
Devils Lake ^{1 5}	Devils Lake		T.	T.						.02		.01	.03		.22						.04	.06				.01	T.						0.52	
Edgeley	James		.02	T.					.09	.06			.02		.03	.04					.02	.06				.16	.02						0.47	
Edmore	Devils Lake														.16							.09				.10							0.21	
Ellendale	James									.01					.01	.09					.02					.08	T.						0.77	
Fargo ^{1 5}	Red.		.01		.02				.03	T.		.01	T.	T.		.25	.33				.05	.02	T.		T.	.02	.01	T.					0.63	
Forman	Sheyenne		T.	.08					.03	T.					.04	T.					.06	.48				.08							0.38	
Fullerton	James		T.						.08	.03						.08					.06	.02			T.	.08	.03							
Gackle	do																																0.47	
Grafton	Red.		T.													.30				.01	T.	.12				.04							0.60	
Grand Forks Airport ³	do		T.												.30	.02				.02	.12	.06		T.		.01	.03						0.17	
Hankinson ²	do												.02	.06			.03	.02			.02												0.35	
Hannah	Pembina															.12					.17					.01							0.22	
Hillsboro	Red.		.02		T.										.07	T.				.01	.01	.02				.05	.02						0.49	
Jamestown Airport ³	James		.04							.01	T.		.01		.07	.01				.05	.08	.08	.03		.02	.02	.04	T.					0.21	
Langdon	Pembina														.24						.02	.08				.03							0.41	
Larimore	Red.																																0.30	
Lisbon	Sheyenne		T.												.06	.22				T.	T.	T.				.02	T.						0.92	
Mayville	Red.		.02												.09	.54	T.	T.		.02	T.	.09	.04			.01	.03						0.28	
McHenry	James														.08	.11				T.	T.	.04											0.45	
McLeod	Sheyenne									.06						.34					T.		T.				.05							0.27
Oakes ²	James									.07	.04										.07		T.			.05		.04						0.23
Park River	Red.														.10	T.				.03	T.	.11				.02	T.						0.80	
Pembina Airport ³	do				.01				.01				.04		.41	.03	T.			.07	.10	.02	T.			.05	.02						0.34	
Petersburg	do														.22						.12					.02							0.28	
Sharon	do									.01	T.				.08					.01	.01	.15				.02							0.30	
Valley City	Sheyenne									.01	T.				.11					.06	.06					.06	T.						0.83	
Wahpeton	Red.		T.							.04			.05	.02		.05	.06					.04				.03	.04							
<i>Middle Division</i>																																		
Ashley ³	Missouri									.10				T.	T.					.04	T.				.03	T.	.02	.06		.07	.02	.01		0.35
Bisbee	Devils Lake															.37																	0.37	
Bismarck Airport ^{1 5}	Missouri		.01	T.				T.	.02	.01	T.	T.	T.	T.		.03	T.		.02	T.	T.	T.	.09	.02	.06	.01	.03	T.					0.30	
Bottineau ²	Mouse									.03	.02					.24	.05	T.				.02	.06			T.	.06	T.					0.48	
Butte	do																																	
Carson	Heart		T.							.10	T.	T.	T.	.02						.01	T.	T.	.11	.20	T.	T.							0.44	
Center	Missouri		.02										.01							.03			.15	.07									0.28	
Drake ²	Mouse												.01			.09				.01						.02	.02						0.15	
Dunseith	do									.18						.22				.18	T.												0.58	
Eckman	do									.05						.27						.06	T.	.05									0.45	
Fessenden	James														.11	.06					.12					.09							0.38	
Fort Yates	Missouri								.20														.10	.25	.10	.10							0.75	
Foxholm	Mouse		T.																	.20	T.	T.	T.	.02	.01	T.	T.	T.					0.23	
Garrison ³	Missouri		.10													.07			.04	.01	T.	.03	.14	.06	.02	T.							0.47	
Granville	Mouse															.03	.10			T.	T.	.03	.06	.03	T.	.03	.08						0.33	
Hansboro	Devils Lake															.05	.14				.02					T.							0.24	
Linton	Missouri																																0.42	
Maddock	Sheyenne															.20				.03	.05	T.				T.	.14	T.					0.47	
Mandan ²	Missouri		T.	.02					.02							T.				.06	T.	.07	.02	.20	.04	.04	T.						0.40	
Max ²	do			.07																.02		.05	.04	.07		T.	.03	.10					0.35	
McClusky	do		.04																			.07	.03			.16							0.18	
Minot Airport ³	Mouse		T.		T.	T.													.02	.01	T.	.06	.05	T.	.01	.01	.02	T.					0.27	
Mohall	do															.12																	0.29	
Napoleon	Missouri								.07	T.	.03	T.	.02		.01	.03				.03	.01	.02	T.	.03	.04	.03	T.						0.22	
New Salem	Heart								.04				.03							.03	.01		.05	.05		.02	.10	.02					0.45	
Pettibone	James			.05						.02			.02		.11					.03	.03	.05				.02	.10	.02					0.48	
Rolla	Devils Lake														.16	.18				.02	.04	.02				.01	.01						0.41	
Rugby	Mouse									.05					.13					.05	.05	.07				T.	.01	.03					0.45	
Selfridge	Missouri								.20														.15	T.		T.	T.	T.					0.22	
Steele	do		T.							.18	T.	T.														.07	T.	T.					0.31	
Towner	Mouse														.13							.11				.07	T.						0.20	
Turtle Lake	Missouri		T.																	.10						T.	T.						0.44	
Tuttle	do		.02							.02	.01	.05		.01	.06	T.				.03	.02					.04	.06	.02	.04	.02	.04		0.20	
Underwood	do																																0.20	
Velva	Mouse		T.																	.06	T.	T.	.05	T.		.04	.05	T.					0.24	
Washburn	Missouri		.02							.03																.15	T.	.04					0.55	
Westhope	Mouse									.07					.20						.07	T.	.12			.03		.06					0.32	

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVII BISMARCK, N. D., FEBRUARY 1948 No. 2

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GENERAL SUMMARY

The outstanding feature of the weather during February was the heavy snowfall. It was the second heaviest February snowfall of record. Subzero temperatures prevailed during the first two weeks. Due to the continuous cold weather and heavy snowfall the amount of snow on the ground at the close of the month averaged more than 25 inches in the northwest, northeast and at many stations in central North Dakota. The 18th and 19th were windy with blizzard conditions over the central and east portions. A cold front entered the northwest section of the state during the evening of the 18th and moved rapidly eastward with a drop in temperature of 40° to below zero in a few hours. The storm indirectly resulted in the death of four persons. Most highways were blocked and all except the main travelled roads remained blocked or heavy. The snow cover necessitated much yard feeding of livestock. Ice on the Missouri River at Bismarck was 33.5 inches thick at the close of the month. Because of the extended period of snow and ice on streets and highways, there were a large number of minor automobile accidents.—M.S.C.

TEMPERATURE

The mean temperature for the state was 7.0°, or 2.8° below the 1892-1948 average for February. The mean temperature for the eastern division was 5.3°; for the middle division, 6.0°; and for the western division, 9.8°. The highest mean temperature was 15.7° at Marmarth, and the lowest, 0.8° at Eckman, making a range in mean temperature of 14.9°. The absolute range was 97°, from 60° at Medora on the 18th, to -37° at Belcourt on the 8th. The average daily deficiency in temperature for the state since January 1, 1948, is 0.2°.

PRECIPITATION

The average precipitation for the state was 0.99 inch, or 0.52 inch more than the 1892-1948 average for February. In the eastern division the average amount was 1.08 inches; in the middle division, 0.96 inch; and in the western division, 0.92 inch. The greatest monthly amount reported was 1.89 inches at Hillsboro; the least was 0.30 inch at Hansboro. The greatest amount recorded in any 24 consecutive hours was 0.82 inch at Fargo Airport on the 27-28th. The accumulated excess in precipitation for the state since January 1, 1948, is 0.45 inch. The average snowfall was 12.7 inches.

SILENT OBSERVERS

Mr. R. L. Williams, observer at Butte, N. D., passed away on January 28, 1948. His 23 years of excellent weather observations have been a valuable contribution to the climatological history of North Dakota.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.74	2	29.46	18	11.1	52	nw.	19	89	91	79	86	63	1684
Devils Lake....	30.69	9	29.49	18	9.9	34	nw.	19	86	91	81	88	60	1772
Fargo.....	30.73	8	29.46	18	12.8	46	nw.	19	86	85	81	84	57	1719
Williston.....	30.67	2	29.38	18	7.1	29	nw.	18	89	92	81	81	59	1643

† And other dates.

COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	10.0	62	-45	0.59	0.77	0.37	0.58	4.9	4	14	7	8
1893...	-0.3	52	-41	1.01	0.51	0.22	0.58	5.7	4	12	7	8
1894...	8.0	55	-54	0.28	0.23	0.16	0.22	2.3	2	14	9	5
1895...	5.9	65	-40	0.33	0.41	0.33	0.36	3.6	4	13	7	8
1896...	14.3	64	-50	0.56	0.29	0.38	0.41	4.3	3	12	9	8
1897...	6.1	52	-29	1.14	1.05	1.30	1.16	11.5	7	12	7	9
1898...	13.3	65	-40	0.46	0.46	0.46	0.46	4.5	3	13	8	7
1899...	0.4	60	-34	0.22	0.16	0.22	0.20	1.9	3	14	8	6
1900...	1.3	46	-48	0.20	0.55	0.66	0.47	4.5	4	12	9	7
1901...	7.1	60	-48	0.32	0.30	0.31	0.31	2.9	3	15	7	6
1902...	12.1	51	-31	0.73	1.10	1.12	0.98	6.7	6	10	6	12
1903...	3.1	46	-33	0.48	0.25	0.41	0.38	3.7	3	19	4	5
1904...	-2.1	52	-49	0.81	0.56	0.69	0.69	7.6	5	13	6	10
1905...	8.2	64	-42	0.25	0.31	0.37	0.31	2.9	2	19	4	5
1906...	9.8	57	-46	0.20	0.07	0.28	0.18	1.4	2	13	7	7
1907...	10.7	58	-38	0.36	0.21	0.42	0.33	2.8	3	15	7	6
1908...	13.8	62	-49	1.56	0.68	0.87	1.04	10.1	5	12	7	10
1909...	9.6	56	-34	0.28	0.36	0.37	0.34	3.7	4	11	7	10
1910...	3.4	56	-34	0.57	0.40	0.81	0.59	5.6	4	14	7	7
1911...	7.3	55	-50	0.84	0.74	0.52	0.70	8.0	3	15	8	5
1912...	11.8	48	-38	0.19	0.18	0.09	0.15	1.7	2	10	10	7
1913...	8.5	64	-33	0.08	0.09	0.09	0.09	1.0	2	12	8	10
1914...	1.0	57	-44	0.34	0.28	0.40	0.34	3.8	3	12	8	10
1915...	17.4	50	-47	1.32	0.27	0.26	0.62	6.1	3	9	5	14
1916...	6.4	55	-20	0.41	0.45	0.58	0.48	4.8	4	14	8	10
1917...	-0.7	61	-39	0.84	0.58	0.55	0.66	7.1	5	10	8	7
1918...	10.8	60	-48	0.20	0.16	0.29	0.22	2.3	3	13	9	6
1919...	7.7	58	-41	0.68	0.73	0.44	0.62	6.5	5	10	8	10
1920...	12.5	53	-40	0.38	0.25	0.28	0.30	3.2	3	11	9	9
1921...	19.9	64	-36	0.52	0.39	0.25	0.39	3.8	3	11	10	7
1922...	0.7	45	-33	1.41	1.17	1.00	1.19	12.8	5	13	6	9
1923...	4.1	48	-39	0.78	0.64	0.51	0.64	7.2	4	13	7	8
1924...	20.3	67	-40	0.39	0.43	0.35	0.39	4.2	3	14	6	9
1925...	16.5	62	-27	0.48	0.30	0.08	0.29	3.6	3	10	9	9
1926...	22.3	58	-39	0.47	0.44	0.31	0.41	3.7	4	9	9	10
1927...	13.3	50	-19	0.49	0.31	0.27	0.36	3.1	4	12	7	9
1928...	18.8	59	-31	0.13	0.06	0.15	0.11	1.2	2	14	8	7
1929...	2.8	44	-19	0.30	0.28	0.30	0.29	3.3	4	12	8	8
1930...	21.7	63	-44	1.41	1.15	0.97	1.18	11.7	6	11	8	9
1931...	28.0	62	-30	0.34	0.20	0.31	0.28	2.9	2	14	6	8
1932...	13.6	69	-31	0.30	0.37	0.30	0.32	4.3	3	12	9	8
1933...	7.9	58	-45	0.25	0.26	0.34	0.28	3.3	3	13	8	7
1934...	19.5	61	-30	0.08	0.04	0.07	0.06	0.7	1	13	8	7
1935...	24.0	63	-25	0.21	0.24	0.15	0.20	1.9	2	13	7	8
1936...	-12.9	43	-60	0.90	0.70	0.50	0.70	9.1	6	12	8	9
1937...	6.8	55	-35	0.83	0.40	0.25	0.49	6.6	4	12	9	7
1938...	7.2	60	-35	0.71	0.63	0.71	0.68	8.6	5	11	7	10
1939...	-0.8	51	-46	0.85	0.60	0.45	0.63	9.7	5	13	8	7
1940...	15.0	52	-29	0.63	0.59	0.60	0.61	7.8	7	5	8	16
1941...	12.2	57	-40	0.23	0.18	0.24	0.22	2.8	3	12	8	8
1942...	14.1	57	-30	0.19	0.30	0.58	0.36	4.6	5	6	9	13
1943...	15.1	62	-32	0.75	0.42	0.33	0.50	6.4	5	11	9	8
1944...	11.2	50	-43	0.19	0.34	0.34	0.29	4.3	4	13	7	9
1945...	15.1	52	-29	0.62	0.23	0.23	0.36	4.6	4	12	8	8
1946...	10.4	60	-40	0.87	0.67	0.44	0.66	8.1	6	10	9	9
1947...	8.8	54	-36	0.54	0.40	0.27	0.40	3.5	5	7	9	12
1948...	7.0	60	-37	1.08	0.96	0.92	0.99	12.7	7	12	8	9
Period	9.8	69	-60	0.55	0.44	0.43	0.47	5.1	4	12	8	8

Climatological Data for February 1948

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches						Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy			
Eastern Division																					
Arvilla, 1 1/2 mi. N.	Grand Forks	960	5	5.0	.....	38	25	-34	8	1.77	.....	0.79	19	21.8	5	16	8	5	nw.	Albert Thoren.
Carrington	Foster	1,579	51	4.4	-4.5	35	15	-24	8	0.94	+0.46	0.33	27	11.8	7	9	12	8	nw.	Soo Line Agent.	
Casselton	Cass	934	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ashton Lockhart
Cavalier	Pembina	894	41	3.0	-3.1	39	25	-28	7	1.42	+0.91	0.77	26-27	16.5	6	12	8	9	nw.	City Light & Power Co.	
Colgate	Steele	1,180	15	.....	.....	.....	.....	.....	.....	1.43	+0.94	0.75	22	14.5	4	2	16	11	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	52	5.2	-2.6	32	16	-31	8	1.44	+0.92	0.48	28	20.2	5	13	3	13	nw.	R. J. Lockner	
Courtenay	Stutsman	1,523	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	73	4.0	-1.1	35	16	-25	8	0.83	+0.32	0.25	23-24	12.6	10	12	9	8	w.	U. S. Weather Bureau.	
Edgeley, 2 miles S.	LaMoure	1,568	48	9.6	-3.2	40	17	-21	8	0.48	0.00	0.31	28	4.6	8	8	16	5	nw.	N. Dak. Agri. Exp. Sta.	
Edmore, 1 1/2 miles W.	Ramsey	1,524	25	1.8	-3.0	30	16	-31	8	1.21	+0.80	0.37	27	14.6	8	18	4	7	nw.	Mike Davis.	
Ellendale	Dickey	1,457	50	9.6	-3.5	43	17	-22	3	0.73	+0.24	0.43	27-28	7.3	6	13	6	10	s.	J. E. Demmer.	
Fargo Airport, 2 1/2 mi. NNW	Cass	895	68	5.6	-2.5	33	18	-27	8	1.60	+0.89	0.82	27-28	15.8	12	12	7	10	n.	U. S. Weather Bureau.	
Forman	Sargent	1,249	57	8.2	-3.7	40	16	-26	8	0.54	+0.04	0.15	19	6.3	6	14	8	7	sw.	Art Waterman.	
Fullerton	Dickey	1,439	51	10.2	-2.2	40	17	-21	8	0.96	+0.25	0.42	28	8.1	10	8	10	11	s.	F. O. Alin.	
Gackle	Logan	1,951	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tony Martin.
Grafton	Walsh	827	57	5.4	-1.9	33	16	-33	8	1.47	+0.90	0.64	27	18.0	4	16	4	9	nw.	Dr. J. C. Lamont.	
Grand Forks, 2 miles W.	Grand Forks	830	58	3.0	-4.7	33	25	-31	8	1.17	+0.61	0.63	26-27	13.2	8	10	4	15	nw.	University of N. Dak.	
Grand Forks Apt., 2 1/2 mi. W	Grand Forks	834	8	2.3	.....	33	16	-30	8	1.03	.....	.....	27	13.1	11	10	6	13	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	20	7.2	-6.9	45	17	-22	8	0.95	+0.41	0.54	27-28	12.0	5	16	1	12	.....	Soo Line Agent.
Hannah	Cavalier	1,568	55	0.9	-1.7	34	25	-32	8	0.74	+0.15	0.30	23	9.3	3	11	10	8	nw.	A. E. Prior.	
Hillsboro	Trails	901	43	4.7	-5.5	36	13	-30	8	1.89	+1.34	0.62	27-28	21.6	8	3	18	8	ne.	Alfred Jahuka.	
Jamestown, 2 miles SE	Stutsman	1,457	57	8.0	-1.9	38	17	-23	8	0.66	+0.07	0.40	27-28	8.6	5	11	9	9	nw.	N. Dak. State Hospital.	
Jamestown Airport, 2 mi. NE	Stutsman	1,494	8	6.6	.....	38	17	-25	8	1.00	.....	.....	18-19	8.8	11	10	6	13	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	8	6.7	.....	35	25	-24	8	1.07	.....	.....	26-27	12.4	7	10	11	8	nw.	U. S. Wildlife Refuge.
LaMoure	LaMoure	.....	2	8.8	.....	42	17	-26	3	0.51	.....	.....	28	7.1	5	13	9	7	se.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	53	2.1	-2.7	32	25	-29	8	1.17	+0.54	0.42	19	11.2	12	12	7	10	nw.	V. Sturlaugson.	
Larimore	Grand Forks	1,134	56	4.8	-2.9	34	25	-28	8	1.55	+1.00	0.51	27	18.4	5	9	6	14	w.	Jesse P. Phillips.	
Lisbon	Ransom	1,091	45	7.6	-4.0	40	16	-28	8	0.67	-0.08	0.37	27-28	12.4	7	16	5	8	nw.	Robert M. Jodsaas.	
Mayville	Trails	975	53	5.9	-3.9	34	16	-28	4	1.68	+1.24	0.40	27-28	21.3	11	11	9	8	n.	H. A. Ragaz.	
McHenry, 6 miles NNE	Eddy	1,509	26	4.0	-1.4	32	16	-30	8	1.09	+0.64	0.30	26-27	9.3	10	14	4	11	se.	C. E. Blasky.	
McLeod, 3 miles E.	Richland	1,075	37	6.6	-6.4	40	17	-33	3	0.88	+0.32	0.74	27-28	10.9	3	20	6	3	nw.	J. G. Carlson.	
Munich, 3 1/2 miles SW	Cavalier	1,598	1	2.2	.....	30	13	-29	8	0.87	.....	.....	27-28	11.1	8	10	11	8	nw.	Harold Feldner
Oakes	Dickey	1,318	20	6.7	-6.2	44	17	-25	3	0.53	+0.07	0.15	19	7.2	6	14	6	9	n.	C. M. Haagen.	
Park River	Walsh	998	45	4.8	-2.9	37	25	-29	8	1.51	+1.09	0.80	27	19.3	3	15	4	10	nw.	Martin Severson.	
Pembina Airport, 1 mile S.	Pembina	795	75	1.8	-1.0	30	25	-31	8	0.49	-0.13	0.26	23-24	4.8	7	6	7	16	nw.	U. S. Airway Comm. Sta.	
Petersburg	Nelson	1,524	18	2.8	.....	31	16	-28	8	1.73	+1.23	0.50	27	21.5	7	11	8	10	nw.	T. C. Overland.
Sharon	Steele	1,516	25	3.2	-6.3	30	16	-28	8	1.20	+0.72	0.50	26-27	14.5	9	14	4	11	sw.	Hugh Lyon.	
Valley City	Barnes	1,229	44	8.3	-3.2	36	27	-27	8	0.72	+0.13	0.35	28	11.5	7	11	5	13	ne.	Miss L. C. Robertson.	
Wahpeton	Richland	962	57	8.2	-4.2	38	16	-30	8	1.06	+0.59	0.42	27-28	12.4	9	14	11	4	se.	State School of Science.	
Average for Eastern Division				5.3	-3.7	45	17	-34	8	1.08	+0.53	0.82	27-28	13.3	7	12	8	9	nw.		
Middle Division																					
Ashley	McIntosh	2,025	53	7.4	-4.0	43	17	-21	8	0.88	+0.43	0.60	27-28	11.0	7	17	5	7	w.	Raymond R. Spitzer	
Belcourt	Rolette	1,960	4	2.0	.....	42	25	-37	8	0.56	.....	.....	23-24	6.4	5	10	11	8	w.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	46	.....	.....	.....	.....	.....	.....	1.64	+1.28	0.43	27	20.0	8	.....	.....	.....	.....	Robert L. Peterson.
Bismarck	Burleigh	1,670	74	9.8	-1.8	45	17	-26	3	1.04	+0.65	0.37	27	13.1	10	9	8	12	e.	U. S. Weather Bureau.	
Bismarck Airport, 2 1/2 mi. SE	Burleigh	1,650	9	7.0	-1.5	44	17	-28	3	0.85	+0.39	0.36	27	12.7	10	9	8	12	e.	U. S. Weather Bureau.	
Bottineau	Bottineau	1,638	57	3.8	-1.1	31	25	-30	2	0.51	+0.15	0.23	23	7.5	9	11	8	10	nw.	N. D. School of Forestry.	
Butte, 3 miles WSW	McLean	1,880	24	.....	.....	.....	.....	.....	.....	1.22	+0.69	0.50	27-28	12.6	5	.....	.....	.....	.....	M. O. Anderson.
Carson, 2 miles SW	Grant	2,500	37	11.7	-2.8	52	17	-21	11	1.10	+0.62	0.45	27-28	13.6	5	6	13	10	s.	J. W. Evans.	
Center	Oliver	2,100	11	8.6	.....	46	17	-25	3	1.50	.....	.....	28	17.7	7	8	14	7	se.	Fred L. Heluz.
Drake	McHenry	1,634	19	3.7	-6.7	41	15	-26	2	1.42	+0.95	0.70	27-28	21.1	8	14	8	7	se.	Geo. A. Paulus.	
Dunseith, 2 miles NNE	Rolette	1,682	53	3.4	-3.3	40	25	-26	8	0.79	+0.37	0.20	27	11.1	7	15	5	9	w.	State Tuberculosis San.	
Eckman	Bottineau	1,500	43	0.8	-6.7	33	25	-33	3	1.03	+0.66	0.34	27-28	11.5	7	14	6	9	nw.	E. R. Sherman.	
Fessenden	Wells	1,610	37	6.2	-3.5	39	17	-27	8	1.51	+0.99	0.42	27	14.7	8	16	11	2	nw.	John V. Zuber.	
Fort Yates	Sioux	1,670	49	12.0	-0.6	51	17	-18	8	0.60	+0.14	0.20	27	8.5	5	15	8	6	nw.	P. J. Jacobson.	
Foxholm, 6 1/2 miles NE	Ward	1,609	28	7.2	-4.8	39	16	-24	8	0.85	+0.38	0.36	27-28	17.0	7	14	5	10	nw.	U. S. Wildlife Refuge.	
Garrison	McLean	1,911	72	7.6	-3.5	41	16	-20	2	1.52	+1.01	0.55	27	18.1	8	8	7	14	n.	Mae H. Vorachek.	
Granville	McHenry	1,504	42	5.8	-4.2	39	16	-27	8	1.06	+0.63	0.36	19	13.0	7	19	3	7	nw.	Fred Risher.	
Hansboro	Towner	1,597	41	1.8	-4.3	36	25	-28	6	3.00	-0.20	0.22	23-24	4.0	6	12	7	10	sw.	W. E. Dishler.	
Harvey, 3 miles SE	Wells	1,596	46	.....	.....	.....	.....	.....	.....	0.57	+0.12	0.20	18-19	10.0	7	10	7	12	se.	H. J. Reynolds.
Leeds	Benson	1,515	8	4.7	.....	36	16	-29	8	0.86	.....	.....	27	11.0	3	8	18	3	w.	John Dalmage.
Linton	Emmons	1,711	32	9.8	-4.0	50	17	-23	3	0.69	+0.27	0.38	27-28	10.0	5	14	5	10	se.	Wm. Heyerman.	

Climatological Data for February 1948-Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours ⁴	Date	Snowfall, unmelting	With .01 in. or more precip.	Clear	Pt. cloudy			Cloudy
Western Division-Con.																				
Dickinson Airpt., 5 1/2 mi. S.	Stark	2,587	8	10.2	.....	51	17	-20	3	0.72	.....	0.28	23	7.1	9	9	8	12	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	50	11.0	-3.1	46	17	-25	3	0.83	+0.37	0.20	27	12.0	7	9	9	11	nw.	O. T. Evenson.
Elbowoods	McLean	2,082	56	11.2	-0.9	44	17	-22	31	0.75	+0.36	0.38	27	10.0	7	16	7	6	nw.	H. W. Case.
Epping	Williams	2,224	40	7.9	-1.5	40	16 1/2	-25	11	0.44	+0.04	0.29	27	5.6	2	15	5	9	nw.	T. Beachler.
Fairfield, 9 1/4 miles N	Billings	2,650	20	.....	.....	.....	.....	.....	.....	0.77	+0.35	0.31	26-27	8.8	4	12	3	14	nw.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	8	14.9	-1.1	53	18	-15	6 1/2	0.86	+0.46	0.32	22-23	12.1	8	11	8	10	nw.	Chester K. Puda.
Grenora	Williams	2,114	40	8.1	-0.9	40	25	-21	11	0.86	+0.41	0.60	27	11.0	4	18	5	6	nw.	L. D. Nielson.
Halliday	Dunn	2,073	7	.....	.....	.....	.....	.....	.....	0.89	.....	0.31	23	16.0	7	14	8	7	se.	John Kisse.
Hettinger	Adams	2,675	42	14.4	-2.1	54	17 1/2	-17	3 1/2	0.41	-0.02	0.12	27	5.3	5	10	13	6	nw.	Edgar Martin.
Kenmare	Ward	1,799	17	5.4	-2.8	43	25	-20	8	1.58	+1.19	0.55	27-28	20.8	6	10	7	12	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	40	15.7	-1.5	59	18	-26	11	0.91	+0.50	0.45	23	13.4	7	13	3	13	nw.	S. P. Grane.
Medora, 1 1/2 mi. W.	Billings	2,271	34	14.2	.....	60	18	-28	3	0.68	+0.29	0.50	23	10.5	3	20	3	6	sw.	Harry Roberts.
Mott	Hettinger	2,424	42	13.7	-0.4	54	18	-24	3	0.49	+0.01	0.15	9-10	5.7	5	12	13	4	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	57	11.5	-3.0	53	17	-24	3	0.93	+0.44	0.41	23-24	10.8	9	6	17	6	nw.	Alfred Hasel.
Parshall	Mountrail	1,929	34	7.8	-0.9	40	16	-26	20	1.05	+0.66	0.28	19	18.5	9	5	18	6	nw.	C. E. Shubert.
Portal	Burke	1,954	35	1.0	-5.2	39	15	-26	8	1.77	+1.39	0.57	23	23.6	4	23	6	10	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	44	5.1	-6.7	38	16	-28	21	1.33	+0.88	0.30	26	15.1	7	13	8	8	nw.	E. J. Lewis.
Richardton, 1 1/2 miles N	Stark	2,467	33	13.7	-1.0	51	17	-17	3	1.15	+0.74	0.36	27-28	13.5	7	11	10	8	nw.	Assumption Abbey.
Ryder	Ward	2,103	20	.....	.....	.....	.....	.....	.....	0.65	+0.17	.....	.....	8.0	.....	.....	.....	.....	.....	S. C. Schellenbaum.
Sanish	Mountrail	1,835	23	6.0	-2.6	47	15	-27	20	1.17	+0.72	0.40	27-28	14.5	8	11	8	10	w.	H. J. Bugge.
Stanley	Mountrail	2,258	11	4.1	.....	38	15	-22	21	1.69	.....	0.51	27-28	25.0	7	11	8	10	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	20	.....	.....	.....	.....	.....	.....	0.72	+0.30	0.18	27-28	8.1	11	11	9	9	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	20	.....	.....	.....	.....	.....	.....	1.40	+1.03	0.55	27-28	18.4	4	15	7	7	nw.	L. A. Simon.
Trotters	Golden Valley	.....	23	.....	.....	.....	.....	.....	.....	0.48	+0.10	0.21	27-28	9.1	5	4	19	6	sw.	Walter Grunewald.
Van Hook	Mountrail	1,854	8	9.7	.....	44	25	-22	31	0.88	.....	0.24	28	11.2	7	14	7	8	nw.	H. Glenn Sims.
Watford City	McKenzie	2,084	36	11.8	-1.9	50	18	-20	31	1.23	+0.80	0.32	27	15.9	9	14	10	5	sw.	J. C. Zeller.
Willdore	Williams	2,258	19	.....	.....	.....	.....	.....	.....	1.45	+0.99	0.51	28	19.1	7	12	7	10	sw.	Jonathan Winkler.
Williston	Williams	1,878	70	8.4	+0.3	43	15	-20	3	1.18	+0.75	0.42	27-28	13.7	10	7	6	16	e.	U. S. Weather Bureau.
Average for Western Division				9.8	-2.4	60	18	-28	8	0.92	+0.49	0.60	27	12.3	6	11	9	9	nw.	
Average for the State				7.0	-2.8	60	18	-37	8	0.99	+0.52	0.82	27-28	12.7	7	12	8	9	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for February 1948																																		
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum...	20	2	8	10	8	9	1	-2	0	-1	1	14	29	11	29	38	43	39	2	18	25	27	29	21	35	31	29	19	19	...	17.7		
	Minimum...	7	-16	-18	-15	-8	-13	-12	-21	-16	-13	-15	-17	-8	-3	-4	5	21	6	-8	-12	-7	4	16	14	8	13	25	15	-11	...	-2.9		
Bismarek Airport	Maximum...	17	1	5	8	4	1	0	-2	-1	-1	8	24	32	14	32	42	44	37	5	14	30	30	29	21	37	30	25	20	14	...	18.1		
	Minimum...	-5	-22	-28	-16	-4	-21	-20	-21	-10	-13	-18	-12	-2	-3	8	26	10	3	-12	-18	-10	13	21	4	7	15	20	5	-13	...	-4.0		
Bottineau	Maximum...	23	10	4	5	3	2	12	-3	-5	-2	5	20	26	24	13	25	21	17	15	-3	17	23	27	27	31	29	24	22	17	...	14.8		
	Minimum...	5	-30	-20	-10	-12	-22	-20	-28	-13	-21	-21	-11	2	-20	5	4	-4	1	-16	-24	-20	12	21	-4	3	10	17	11	3	...	-7.3		
Carson	Maximum...	18	6	12	15	8	10	5	5	0	1	8	-21	24	35	25	34	40	52	48	40	25	35	33	30	23	42	37	30	20	...	23.6		
	Minimum...	4	-18	-19	-9	-8	-13	-15	-15	-13	-8	-21	2	-6	7	23	21	14	-7	-8	4	15	21	8	8	25	18	10	-13	...	-0.2			
Crosby	Maximum...	5	3	7	2	1	2	3	-6	-8	-3	5	21	24	4	39	30	11	32	-2	7	27	33	22	22	36	27	19	15	5	...	13.1		
	Minimum...	-2	-13	-17	-17	-11	-21	-18	-20	-18	-15	-23	-18	-4	-13	-13	-1	3	-14	-18	-20	-7	15	-6	-4	15	14	11	-13	...	-8.7			
Devils Lake	Maximum...	18	-7	9	8	3	5	3	-6	-3	-2	5	20	26	1	34	35	14	20	7	0	15	24	27	26	32	25	23	19	16	...	13.7		
	Minimum...	-10	-21	-17	-15	-9	-16	-20	-25	-16	-16	-18	-3	0	-18	-2	4	3	-2	-15	-16	-15	10	21	2	6	12	16	6	2	...	-5.8		
Dickinson Airport	Maximum...	18	3	11	15	5	10	7	7	0	-3	8	26	30	15	42	40	51	47	7	21	35	38	29	21	38	35	25	15	25	...	21.4		
	Minimum...	-10	-18	-20	-6	-6	-16	-16	-10	-9	-18	-18	0	8	0	9	26	16	-2	-8	-5	9	19	11	-4	14	24	14	-5	-8	...	-1.0		
Dunn Center	Maximum...	24	5	14	14	12	10	8	8	3	-1	10	27	34	24	44	42	46	45	43	13	37	35	31	20	40	33	28	18	14	...	23.5		
	Minimum...	4	-18	-25	-10	-8	-22	-11	-16	-8	-9	-17	1	9	-8	3	21	13	8	-10	-13	8	17	18	-1	10	18	17	11	-22	...	-1.4		
Fargo Airport	Maximum...	14	-4	2	5	4	6	-1	-6	0	0	3	15	28	5	25	32	28	33	23	7	16	25	32	32	33	31	32	22	18	...	15.9		
	Minimum...	-4	-18	-24	-18	-5	-10	-24	-27	-14	-15	-17	-9	-1	-14	-1	7	10	6	-13	-21	-17	12	24	2	4	15	22	15	2	...	-4.6		
Fessenden	Maximum...	25	0	7	12	8	2	0	-3	-5	-2	8	20	28	22	37	39	25	26	4	25	26	28	25	35	34	26	24	22	...	17.9			
	Minimum...	-2	-23	-20	-16	-8	-16	-17	-27	-13	-16	-18	-2	10	-11	-2	4	8	1	-12	-18	-17	16	23	5	1	9	4	0	0	...	-5.4		
Fullerton	Maximum...	21	11	3	3	5	8	4	-3	-1	1	5	14	31	25	29	38	40	32	36	14	25	29	30	32	35	35	31	30	18	...	20.0		
	Minimum...	11	-14	-18	-17	-4	-11	-8	-21	-9	-11	-12	-10	-2	-5	2	16	19	5	-7	-13	-8	15	25	16	8	23	27	14	3	...	0.3		
Garrison	Maximum...	18	1	6	10	5	10	-4	1	-3	0	11	25	30	9	34	41	36	32	5	6	27	30	28	18	40	29	22	21	14	...	17.3		
	Minimum...	-8	-20	-18	-12	-8	-16	-18	-18	-10	-11	-16	-2	8	-8	7	23	11	-5	-12	-16	-11	13	18	7	13	20	17	9	-8	...	-2.1		
Golva	Maximum...	22	13	20	20	6	7	5	18	10	1	11	32	31	29	44	43	45	53	26	24	38	45	33	24	41	39	33	24	28	...	26.4		
	Minimum...	5	-10	-12	-9	-5	-15	-12	-9	-6	-13	-15	6	7	4	15	25	24	23	-14	-6	10	29	12	-5	16	32	23	3	-3	...	8.4		
Grafton	Maximum...	29	7	8	2	6	6	3	-8	-2	5	6	21	32	25	16	33	15	20	20	2	9	23	29	30	32	32	27	28	16	...	16.3		
	Minimum...	5	-19	-24	-20	-11	-12	-15	-33	-16	-26	-17	-2	7	-19	3	10	-1	5	-9	-20	-19	6	22	12	-4	0	6	16	18	...	-5.4		
Grand Forks Airport	Maximum...	18	-2	0	1	2	3	-2	-6	-6	-2	3	17	28	3	21	33	15	24	11	0	15	25	31	30	32	28	26	21	17	...	13.3		
	Minimum...	-10	-23	-25	-22	-10	-16	-26	-30	-22	-24	-23	-10	1	-18	-4	2	0	5	-16	-21	-20	11	22	-4	0	6	21	8	-4	...	-8.7		
Jamestown Airport	Maximum...	17	2	5	9	7	10	0	-4	-3	-1	4	25	29	5	29	33	38	33	12	7	23	27	28	27	32	27	20	16	...	16.7			
	Minimum...	-5	-20	-24	-19	-3	-13	-19	-25	-11	-11	-17	0	4	-8	0	28	6	3	-13	-20	-16	14	23	0	3	21	19	8	-2	...	3.5		
Kenmare	Maximum...	9	8	8	7	9	12	4	-5	-4	4	10	24	17	8	39	31	12	24	5	-10	26	28	25	43	43	26	19	15	20	...	15.8		
	Minimum...	2	-16	-15	-6	-9	-14	-16	-20	-14	-13	-15	-13	6	-10	-9	-9	4	2	-11	-15	-14	0	21	-3	-1	21	14	13	-3	...	-5.0		
Langdon	Maximum...	20	10	8	6	8	4	1	-2	-4	-4	-2	17	31	22	12	28	17	12	12	4	12	22	25	34	32	26	24	22	17	...	14.2		
	Minimum...	-1	-28	-25	-16	-8	-26	-20	-29	-23	-23	-21	-8	-7	-27	-7	5	-4	-2	-12	-28	-20	2	19	2	1	1	13	5	-4	...	-10.0		
Marmarth	Maximum...	18	10	20	20	12	16	10	27	23	-2	2	25	34	29	42	44	55	59	48	25	33	48	37	24	44	40	37	26	25	...	28.7		
	Minimum...	1	-8	-12	-6	0	-16	-15	-10	-4	-9	-26	-15	-5	8	8	22	32	30	-5	-4	12	12	17	-4	10	24	25	10	-5	...	2.7		
Minot Airport	Maximum...	17	1	7	10	3	6	-3	-1	-6	-3	10	23	24	7	42	37	30	26	-1	3	25	28	27	17	36	25	22	17	...	15.5			
	Minimum...	-9	-20	-10	-7	-8	-13	-16	-21	-13	-16	-7	-5	-9	3	7	5	-2	-11	-13	-14	18	16	0	17	19	16	1	-3	...	-3.0			
Mott	Maximum...	26	12	12	16	12	11	12	9	9	-2	8	26	33	28	43	44	52	54	47	23	32	38	32	22	42	38	35	21	28	...	26.4		
	Minimum...	4	-18	-24	-8	-5	-21	-11	-15	-9	-8	-20	-6	3	2	5	22	25	24	-6	-9	8	17	20	5	8	12	20	9	12	...	1.0		
Pembina Airport	Maximum...	20	-4	5	2	2	5	1	-6	-8	1	6	17	26	1	20	28	11	15	3	-5	15	24	29	29	30	24	26	21	18	...	12.2		
	Minimum...	-7	-25	-25	-17	-9	-23	-23	-31	-22	-25	-16	-9	-4	-18	-3	0	-3	-2	-15	-25	-21	15	23	-1	1	15	17	7	-2	...	-8.5		
Sharon	Maximum...	18	3	4	5	8	3	-5	-3	-10	-4	1	20	26	17	17	30	19	20	25	-3	10	20	27	28	30	27	25	20	17	...	13.9		
	Minimum...	0	-21	-25	-15	-8	-16	-21	-28	-15	-20	-20	-8	1	-20	-5	10	4	0	-12	-22	-20	0	15	0	-5	10	18	8	-2	...	-7.5		
Steele	Maximum...	13	2	3	14	3	4	4	0	-2	0	4	16	30	21	25	40	43	29	38	7	27	28	29	25	36	30	27	23	17	...	18.5		
	Minimum...	1	-22	-24	-15	-8	-15	-17	-24	-13	-10	-22	-10	-5	-9	-1	7	10	3	-12	-20	-14	12	23	-3	-3	8	17	20	10	-2	...	-5.0	
Valley City	Maximum...	26	14	10	5	5	5	4	-3	-2	3	5	17	29	26	20	35	35	26	23	7	17	26	27	31	35	34	36	29	20	...	18.8		
	Minimum...	10	-13	-24	-19	-8	-10	-10	-24	-13	-13	-14	-3	-1	-10	-1	18	12	2	-8	-16	-18	10	21	17	1	21	20	13	-2	...	-2.2		
Wahpeton	Maximum...	22	11	2	5	8	6	3	-9	-3	7	2	20	28	25	24	38	37	35	33	11	18	26	31	32	35	34	33	27	20	...	19.6		
	Minimum...	7	-19	-28	-19	-19	-14	-12	-30	-12	-12	-19	-18	0	-13	-5	14	19	10	-8	-19	-17	10	22	19	2	20	27	16	2	...	-3.3		
Williston	Maximum...	18	6	12	12	6	8	0	4	-1	-2	12	21	29	11	43	41	37	43	4	9	35	35	29	23	42	30	26	17	8	...	19.2		
	Minimum...	-9	-12	-20	-2	-4	-17	-11	-11	-7	-13	-17	-1	3	-8	8	4	11	-7	-11	-15	6	22	9	-4	21	24	16	5	-15	...	-2.8		

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington ²	James Red.						T.				.01	.04	.03			.04	T.			.24				.25				.33					0.94	
Casselton	Sheyenne					T.					T.	T.			T.	.10				.26				.25				.35	.48				1.44	
Cooperstown	James																																	
Courtney	Devils Lake					T.				.02	T.	.01			T.	.06	.01		T.	.11			T.	T.	.21	.04		.03	.23	.11	T.			0.83
Devils Lake ^{1 5}	James											.02				.02				.02			T.	.03			.01	.02	.31	.05				0.48
Edgeley	Devils Lake										.03	T.	.07			T.	.16	T.		.18			.04	.11	T.	.15			.37	.17	T.			1.21
Edmore	James					T.	T.					.07	.04			T.				.08				.07					.04	.43				0.73
Ellendale	Devils Lake																																	
Fargo ^{1 5}	Red.					.02	.01	T.	T.		.01	.01			.01	.24	.01			.05	.32		T.	.08	T.		T.	T.	.27	.57	T.			1.60
Forman	Sheyenne										.08	T.	.07			T.					.15				.10	.01			T.	.13	T.			0.64
Fullerton	James					.02	T.				T.	.04	.08		.04		.03			.06	.06		T.		.16			.05	.42				0.96	
Gackle	do																																	
Grafton	Red.											T.			T.	T.				.17				.48	.18			.64		T.			1.47	
Grand Forks Airport ³	do					T.	T.				.03	T.			T.	.04	.02	T.		.01	.05		T.		.32	.04		.02	.43	.04			1.03	
Hankinson ²	do							T.			T.	.03		.13						.06	.07		T.					T.	.54	.15			0.95	
Hannah	Pembina																					.24		.30									0.74	
Hillsboro	Red.					T.		T.				.05			.03	.06				.23			T.	.33	.09			.48	.62				1.89	
Jamestown Airport ³	James					T.	.02	T.			.09	.02			.01	.02	.15		.21	.08		T.		.15	T.		T.	.10	.15				1.00	
Langdon	Pembina										.01	.02			.03	.01	.03		.03	.42			.03		.24	.18			.09	.08			1.17	
Larimore	Red.															.20				.23				.31				.51	.30				1.55	
Lisbon	Sheyenne										.02	.01			.03	T.				.08				.16				.15	.22				0.87	
Mayville	Red.										.01	.04			.07	.13				.35			.01	.23	.04			.39	.40					

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

MAY 10 1948

UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

28

VOL. LVII

BISMARCK, N. D., MARCH 1948

No. 3

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GENERAL SUMMARY

March was cold and relatively dry. There were no severe storms, but blowing and drifting snow during the first half of the month kept all but main highways blocked. Most areas have had a continuous snow cover since last November, necessitating yard feeding with resulting shortage of feed in some localities. The temperatures were unusually low through the 17th. At Fargo the -34° was the lowest March temperature since 1881. At Bismarck the -31° was the lowest since 1897, and at Williston -29° was the coldest since March 1906. While over the state the -40° has not been equaled in March since 1916. Ice on the Missouri River reached a thickness of 33.5 inches by the middle of the month; this heavy channel ice was still solid at the close of March. The snow melted rapidly during the last ten days of March and the larger streams began rising. The crest of the Missouri, 15.9 feet, was reached on the 31st. The smaller streams rose rapidly and over the west, in combination with local ice jams, reached flood stages in local areas noticeably the Cannon Ball River near Cannon Ball which washed out a portion of the Northern Pacific Railroad grade disrupting traffic for several days. The Heart River began breaking up near Mandan on the 18th with an ice jam forming at the Training School bridge. This jam washed the bridge down stream and lodged it against the Northern Pacific mainline bridge. The ice jam held, with flood waters topping the dike and then washing away portions of it in the Syndicate area, inundating the south portion of Mandan on the 23d. Bottomlands east of Mandan were also flooded and U. S. Highway 10 was closed from the evening of the 20th to April 1st. Damage to property over the flooded areas east of Mandan, in the south portion of Mandan and to farm fences and farm buildings was about \$300,000. No lives were lost.—M.S.C.

TEMPERATURE

The mean temperature for the state was 17.6° , or 6.3° below the 1892-1948 average for March. The mean temperature for the eastern division was 16.8° ; for the middle division, 16.3° ; and for the western division, 19.7° . The highest mean temperature was 27.5° at Hettinger, and the lowest, 10.2° at Eckman, making a range in mean temperature of 17.3° . The absolute range was 104° , from 64° at Mott on the 22d, to -40° at Munich on the 10th. The average daily deficiency in temperature for the state since January 1, 1948, is 2.3° .

PRECIPITATION

The average precipitation for the state was 0.45 inch, or 0.34 inch less than the 1892-1948 average for March. In the eastern division the average amount was 0.71 inch; in the middle division, 0.40 inch; and in the western division, 0.23 inch. The greatest monthly amount reported was 1.30 inches at Hillsboro; the least was a trace at Grenora, Stanley and Tioga. The greatest amount recorded in any 24 consecutive hours was 0.50 inch at Larimore on the 6th. The accumulated excess in precipitation for the state since January 1, 1948, is 0.11 inch. The average snowfall was 5.4 inches.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.93	4	29.28	30	10.4	35	nw.	7	91	94	78	86	64	1481
Devils Lake...	30.95	4	29.32	30	9.9	34	ne.	25	90	77	84	67	67	1551
Fargo.....	30.99	4	29.36	30	12.6	37	se.	25	88	87	80	84	58	1466
Williston.....	30.81	4	29.21	30	7.3	24	se.	24	89	91	73	71	67	1405

† And other dates.

COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	24.2	66	-35	0.87	0.98	0.65	0.83	1.9	4	12	8	11
1893...	13.9	68	-35	1.10	1.30	0.46	0.95	10.0	5	13	7	11
1894...	24.8	69	-22	1.20	1.71	1.43	1.45	10.1	5	12	9	10
1895...	23.2	75	-35	0.07	0.21	0.24	0.17	1.0	2	16	10	5
1896...	15.7	70	-35	1.19	1.15	1.06	1.13	8.0	8	12	10	9
1897...	11.9	58	-48	1.15	1.04	1.90	1.36	8.0	7	15	7	9
1898...	21.3	79	-24	0.77	0.80	0.80	0.79	6.7	5	13	8	0
1899...	7.5	72	-30	1.23	0.96	0.68	0.96	10.0	5	12	10	9
1900...	20.3	77	-24	0.96	0.96	1.11	1.01	8.5	5	14	7	10
1901...	25.3	85	-32	0.95	0.85	0.78	0.86	5.2	5	15	8	8
1902...	27.4	85	-25	2.75	2.90	2.55	2.73	11.7	8	10	6	15
1903...	22.1	80	-24	0.78	0.44	0.42	0.55	5.1	3	12	6	13
1904...	18.2	64	-26	1.26	1.33	1.64	1.41	11.5	5	11	6	14
1905...	32.5	81	-25	1.09	0.85	0.32	0.75	2.3	4	11	8	12
1906...	18.5	67	-34	0.31	0.39	0.44	0.38	3.1	3	15	6	10
1907...	23.1	83	-20	0.57	0.58	1.00	0.72	5.1	4	14	9	8
1908...	21.1	68	-31	1.17	0.94	1.53	1.21	12.1	8	10	9	12
1909...	24.0	61	-24	0.34	0.40	0.26	0.33	2.7	4	10	9	12
1910...	41.3	90	-7	0.83	0.93	1.08	0.94	0.3	3	18	8	5
1911...	30.6	78	-18	0.14	0.26	0.29	0.23	1.6	2	16	10	5
1912...	15.4	65	-28	0.28	0.32	0.52	0.37	3.6	3	17	8	6
1913...	17.2	70	-31	0.82	0.73	1.00	0.85	8.2	6	12	9	10
1914...	25.5	76	-20	0.83	1.06	0.75	0.88	9.2	5	10	9	12
1915...	22.9	63	-23	0.38	0.20	0.07	0.22	2.0	2	16	6	9
1916...	20.3	69	-45	1.43	1.82	1.00	1.42	13.5	6	11	9	11
1917...	22.2	67	-39	0.44	0.33	0.37	0.38	3.9	3	13	10	8
1918...	35.0	82	-15	0.32	0.46	0.42	0.40	2.9	2	16	8	7
1919...	17.8	67	-35	0.63	0.93	0.78	0.78	6.2	4	12	9	10
1920...	22.4	67	-32	0.46	0.83	1.20	0.83	7.1	4	15	8	8
1921...	25.2	75	-22	1.07	1.02	0.81	0.97	9.1	6	9	12	10
1922...	25.8	60	-30	0.96	0.67	0.50	0.71	6.4	4	12	7	12
1923...	18.3	65	-35	0.34	0.44	0.35	0.38	4.8	4	10	10	11
1924...	25.5	58	-20	0.32	0.36	0.75	0.48	4.4	4	10	9	12
1925...	27.4	75	-26	0.74	0.56	0.75	0.68	6.0	4	14	9	8
1926...	25.8	83	-23	0.35	0.19	0.17	0.24	1.8	3	13	10	8
1927...	30.4	77	-10	0.90	0.78	0.47	0.72	6.5	5	13	8	10
1928...	28.1	85	-17	0.69	0.55	0.31	0.52	4.8	3	15	8	8
1929...	30.5	77	-15	0.68	0.65	1.02	0.78	5.3	5	12	8	11
1930...	26.1	62	-17	0.17	0.05	0.05	0.09	0.9	1	17	8	6
1931...	25.7	63	-24	0.99	0.85	0.99	0.94	4.8	5	11	8	12
1932...	18.9	64	-30	0.52	0.60	0.80	0.64	6.0	6	10	11	10
1933...	28.5	70	-14	0.46	0.41	0.49	0.45	3.7	3	14	10	7
1934...	26.3	74	-12	0.43	0.34	0.71	0.49	3.6	4	11	11	9
1935...	26.3	75	-37	2.00	0.89	0.90	1.26	7.0	5	9	11	11
1936...	25.4	73	-27	0.73	0.75	0.94	0.81	8.1	6	10	11	10
1937...	24.8	72	-20	0.42	0.34	0.42	0.39	4.3	3	12	11	8
1938...	33.1	72	-14	0.63	0.57	0.58	0.59	2.5	4	13	10	8
1939...	23.3	81	-29	0.33	0.41	0.42	0.39	5.3	3	16	8	7
1940...	23.1	64	-26	1.19	0.71	0.72	0.87	9.1	7	9	9	13
1941...	24.5	68	-25	0.65	0.64	0.46	0.58	6.8	5	11	8	12
1942...	30.0	66	-8	2.77	1.72	1.01	1.83	12.8	9	9	8	14
1943...	17.0	77	-30	1.08	1.87	1.23	1.23	14.8	7	11	11	9
1944...	16.7	53	-25	1.08	0.65	0.66	0.81	10.2	8	7	9	15
1945...	33.3	77	-27	1.12	1.43	1.48	1.34	2.4	6	13	9	9
1946...	34.8	86	-22	1.10	1.32	0.56	0.99	2.9	5	11	10	10
1947...	22.3	66	-23	0.31	0.28	0.43	0.34	4.1	6	8	11	12
1948...	17.6	64	-40	0.71	0.40	0.23	0.45	5.4	5	13	10	8
Period	23.9	90	-48	0.83	0.78	0.75	0.79	6.1	5	12	9	10

Late Report: At Devils Lake the -32° on the 17th was the lowest since 1905, and the 21.7 inches of snow on the ground on the 7-8th was a new record for March months.

NOT
RECEIVED

Climatological Data for March 1948

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 40 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 11 mi. N.	Grand Forks	960	5	16.3	.....	47	22	-32	10	0.77	.....	0.26	20	9.9	8	18	7	6	nw.	Albert Thoren.
Carrington	Foster	1,579	51	13.6	-10.1	42	22	-32	10	0.34	-0.35	0.18	18	4.0	3	11	8	12	.....	Soo Line Agent.
Casselton	Cass	934	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ashton Lockhart
Cavalier	Pembina	894	41	15.6	-6.4	46	22	-25	10	0.93	+0.17	0.30	6	11.0	7	16	9	6	nw.	City Light & Power Co.
Colgate	Steele	1,180	15	.....	.....	.....	.....	.....	.....	0.90	+0.15	.....	.....	.....	.....	.....	.....	.....	.....	O. M. Jensen.
Cooperstown	Griggs	1,428	52	15.8	-8.5	40	22	-36	10	0.49	-0.22	0.28	18	7.0	3	16	4	11	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	18	.....	.....	.....	.....	.....	.....	0.40	-0.44	0.33	18	5.5	3	9	13	9	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	73	14.9	-4.9	43	22	-32	10	0.75	-0.03	0.27	20	11.0	8	9	11	11	w.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	48	20.2	-7.1	48	28	-26	10	0.39	-0.44	0.13	6	5.0	8	14	8	9	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	25	13.4	-7.7	40	22	-37	10	0.32	-0.37	0.13	6-7	4.2	6	16	8	7	ne.	Mike Davis.
Ellendale	Dickey	1,457	50	21.8	-5.4	52	30	-27	11	0.91	-0.04	0.31	6-7	7.8	9	17	10	4	s.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	68	17.7	-5.0	48	25	-34	10	0.87	-0.14	0.28	6-7	7.2	9	9	10	12	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	57	21.6	-4.4	58	25	-28	10	0.42	-0.38	0.20	6	3.8	5	13	12	6	nw.	Art Waterman.
Fullerton	Dickey	1,439	51	21.3	-5.8	51	28	-26	10	0.74	-0.32	0.32	6	5.4	5	10	12	9	nw.	F. O. Alin.
Gackle	Logan	1,951	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tony Martin.
Grafton	Walsh	827	57	15.3	-6.4	41	23	-33	10	0.84	+0.14	0.35	8	12.8	6	18	5	8	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	58	14.7	-7.8	43	19	-36	10	0.90	+0.12	0.19	20	9.5	9	8	10	13	nw.	University of N. Dak.
Grand Forks Aprt. 2 1/2 mi. W	Grand Forks	834	8	13.4	.....	39	19	-38	10	0.62	.....	0.19	6-7	6.9	9	9	8	14	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	20	19.8	-8.8	54	28	-11	7	0.71	-0.11	0.30	26	1.7	4	7	9	15	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	55	11.1	-8.1	37	19	-35	10	0.76	+0.04	0.34	30-31	9.7	5	12	14	5	nw.	A. E. Prior.
Hillsboro	Trall	901	43	16.8	-8.5	47	19	-34	10	1.30	+0.54	0.43	20	13.8	7	6	14	11	s.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	57	18.5	-5.9	45	22	-29	10	0.69	-0.21	0.43	20	7.0	5	8	14	9	n.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	8	17.0	.....	42	14	-29	10	0.67	.....	0.24	17	7.3	10	10	2	19	n.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	8	14.9	.....	47	14	-31	10	0.61	.....	0.33	17-18	8.2	6	8	14	9	nw.	U. S. Wildlife Refuge.
LaMoure	LaMoure	.....	2	20.5	.....	49	28	-30	10	0.21	.....	0.10	26	3.0	7	9	14	8	se.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	53	13.2	-6.6	40	28	-40	10	0.67	-0.11	0.28	6-7	4.6	8	19	4	8	sw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	56	15.9	-6.8	40	22	-32	10	1.01	+0.20	0.50	6	11.3	4	9	7	15	n.	Jesse P. Phillips.
Lisbon	Ransom	1,091	45	20.2	-7.1	49	30	-25	10	0.83	+0.10	0.37	25-26	9.0	5	19	5	7	nw.	Robert M. Jodsaas.
Mayville	Trall	975	53	16.6	-8.1	41	22	-32	10	0.98	+0.29	0.36	18	10.4	6	9	13	9	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	26	13.5	-9.5	38	22	-36	10	0.81	+0.12	0.23	17-18	7.3	10	17	7	7	w.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	37	20.2	-7.6	50	25	-30	10	0.89	.....	.....	.....	.....	.....	22	6	3	se.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	1	14.3	.....	41	20	-40	10	0.33	.....	0.18	6-7	4.7	7	12	11	8	sw.	Harold Feldner
Oakes	Dickey	1,318	20	20.3	-7.4	54	25	-30	11	0.89	+0.09	0.29	7	11.3	6	15	3	13	n.	C. M. Hagen.
Park River	Walsh	995	45	15.4	-7.4	42	22	-27	10	0.79	+0.13	0.26	20	10.5	5	20	2	9	nw.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	75	12.4	-6.0	39	19	-37	10	0.44	-0.36	0.22	30-31	4.0	7	9	9	13	s.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	18	14.0	.....	39	22	-34	10	1.12	+0.39	0.35	7	14.7	7	17	9	5	nw.	T. C. Overland.
Sharon	Steele	1,516	25	15.2	-9.0	40	22	-36	10	1.15	+0.53	0.28	20	11.8	8	17	3	11	ne.	Hugh Lyon.
Valley City	Barnes	1,229	44	19.7	-6.6	44	28	-29	10	0.52	-0.27	0.22	6-7	5.5	4	14	11	6	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	57	21.1	-6.5	53	25	-34	10	0.62	-0.10	0.35	25-26	3.0	6	12	12	7	se.	State School of Science.
Average for Eastern Division				16.8	-7.4	58	25	-40	10	0.71	-0.12	0.50	6	7.7	6	13	9	9	nw.	
Middle Division																				
Ashley	McIntosh	2,025	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Raymond R. Spitzer
Belcourt	Rolette	1,950	4	13.4	.....	44	23	-32	10	0.28	.....	0.23	30	3.5	4	11	14	6	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	46	.....	.....	.....	.....	.....	.....	0.29	-0.42	0.16	6-7	3.5	4	.....	.....	.....	.....	Robert L. Peterson.
Bismarck	Burleigh	1,670	74	18.6	-6.6	55	22	-30	10	0.45	-0.42	0.15	20	7.0	7	6	10	15	e.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE.	Burleigh	1,650	9	17.2	-4.7	55	22	-31	10	0.39	-0.50	0.13	20	7.2	7	6	10	15	e.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	57	15.6	-5.2	49	23	-35	10	0.25	-0.42	0.12	29-30	3.7	4	12	13	6	nw.	N. D. School of Forestry
Butte, 3 miles WSW	McLean	1,880	24	17.2	-9.2	45	22	-23	10	0.51	-0.31	0.36	20	6.9	3	17	6	8	nw.	M. O. Anderson.
Carson, 2 1/2 miles SW	Grant	2,500	37	21.6	-5.4	62	22	-31	10	0.16	-0.70	0.08	6-7	2.0	3	10	10	11	nw.	J. W. Evans.
Center	Oliver	2,100	11	16.8	.....	50	22	-32	10	0.78	.....	0.23	6-7	10.4	6	7	14	10	nw.	Fred L. Heinz.
Drake	McHenry	1,634	19	14.4	-10.3	43	22	-32	11	0.38	-0.32	0.17	7	4.0	4	18	5	8	nw.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	53	13.8	-6.7	48	23	-30	10	0.29	-0.33	0.13	7	3.8	3	14	11	6	se.	State Tuberculosis San
Eckman	Bottineau	1,500	43	10.2	-12.8	41	22	-31	10	0.55	-0.01	0.25	29-30	5.8	6	11	13	7	nw.	E. R. Shernan.
Fessenden	Wells	1,610	37	15.5	-8.2	43	22	-33	10	0.53	-0.22	0.23	20	8.0	3	15	11	5	w.	John V. Zuber.
Fort Yates	Sioux	1,670	49	22.5	-4.7	63	22	-20	11	0.28	-0.53	0.15	6	4.0	4	16	8	7	nw.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	28	16.4	-9.0	48	22	-27	10	0.12	-0.60	0.08	6-7	1.8	3	14	7	10	nw.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	72	17.2	-7.2	51	22	-28	10	0.63	-0.16	0.25	20	6.4	6	8	10	13	n.	Mae H. Vorachek.
Granville	McHenry	1,504	42	14.6	-9.9	44	22	-32	10	0.31	-0.23	0.22	1	4.7	4	22	6	3	nw.	Fred Roble.
Hansboro	Towner	1,597	41	11.3	-9.4	39	22	-29	9	0.17	-0.71	0.07	1	3.1	5	15	9	7	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	46	.....	.....	.....	.....	.....	.....	0.37	-0.40	0.20	30	3.4	5	9	12	10	nw.	H. J. Reynolds.
Leeds	Benson	1,515	8	14.4	.....	42	23	-35	10	0.44	.....	0.13	7	5.9	5	7	16	8	nw.	John Dulmage.
Linton	Emmons	1,711	32	20.4	-7.6	53	22	-32	10	0.37	-0.41	0.10	17-18	4.6	9	11	8	12	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	34																	

Climatological Data for March 1948-Continued

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days					Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours †	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Dickinson Airpt., 5½ mi. S.	Stark	2,587	8	20.2	.....	57	22	-28	10	0.28	.....	0.24	19-20	2.7	6	7	8	16	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	50	19.3	-6.7	53	22	-31	10	0.19	-0.56	0.19	20	3.0	1	11	9	11	nw.	O. T. Evenson.
Elbowoods	McLean	2,082	56	18.6	-7.6	56	22	-32	10	0.33	-0.20	0.19	20-21	4.5	3	13	11	7	nw.	H. W. Case.
Epping	Williams	2,224	40	18.0	-9.0	55	22	-32	10	0.10	-0.47	0.06	25	1.2	2	20	7	4	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	20	.....	.....	.....	.....	.....	.....	0.25	-0.47	0.25	20	5.0	1	15	8	8	nw.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	8	24.6	-3.0	59	22	-23	10	0.30	-0.45	0.26	19-20	3.8	2	13	12	6	nw.	Chester K. Puda.
Grenora	Williams	2,114	40	18.5	-3.9	55	22	-29	10	T.	-0.68	T.	26½	T.	0	15	9	7	se.	L. D. Nielson.
Halliday	Dunn	2,073	7	.....	.....	.....	.....	.....	.....	0.51	.....	0.23	20	9.0	5	17	6	8	sw.	John Kisse.
Hettinger	Adams	2,675	42	27.5	-1.4	61	22	-19	10	0.03	-0.63	0.03	3	0.5	1	16	8	7	nw.	Edgar Martin.
Kenmare	Ward	1,799	17	16.0	-7.2	45	22	-26	10	0.28	-0.37	0.10	1	3.8	4	11	8	12	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	40	27.0	-1.8	63	22	-22	10	0.26	-0.47	0.08	15	2.0	5	14	4	13	nw.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	34	23.8	.....	63	22	-28	10	0.06	-0.70	0.04	26	0.7	2	18	5	8	w.	Harry Roberts.
Mott	Hettinger	2,424	42	23.8	-3.8	64	22	-24	10	0.15	-0.71	0.05	1	1.0	6	14	12	5	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	57	23.8	-2.3	63	22	-24	10	0.37	-0.44	0.12	20	3.7	7	13	6	12	nw.	Alfred Hasel.
Parshall	Mountrail	1,929	34	15.4	-9.9	50	22	-35	10	0.27	-0.31	0.09	20	4.1	5	5	22	4	nw.	C. E. Shubert.
Portal	Burke	1,954	35	11.9	-6.5	44	22	-32	10	0.10	-0.51	0.10	1	1.5	1	15	10	6	sw.	U. S. Customs Service.
Powers Lake	Burke	2,205	44	15.8	-9.7	52	22	-33	10	0.15	-0.55	0.08	1	1.8	3	10	16	5	se.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	33	21.6	-5.6	56	22	-27	10	0.49	-0.23	0.25	19-20	6.5	5	14	6	11	sw.	Assumption Abbey.
Ryder	Ward	2,108	20	.....	.....	.....	.....	.....	.....	0.20	-0.34	0.08	19½	2.6	4	12	8	11	ne.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	23	15.4	-9.4	53	22	-38	10½	0.29	-0.29	0.08	1	3.9	8	18	7	6	e.	H. J. Bugge.
Stanley	Mountrail	2,253	11	13.7	.....	43	22	-32	10	T.	.....	T.	1½	T.	0	11	9	11	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	20	.....	.....	.....	.....	.....	.....	0.34	-0.28	0.12	1	4.2	8	15	12	4	sw.	Geo. N. Pilgard.
Tioga	Williams	2,279	20	.....	.....	.....	.....	.....	.....	T.	-0.63	T.	7½	T.	0	13	7	11	sw.	L. A. Simon.
Trotters	Golden Valley	.....	23	.....	.....	.....	.....	.....	.....	0.13	-0.64	0.04	26	2.3	5	5	20	6	sw.	Walter Grunewald.
Van Hook	Mountrail	1,864	8	18.6	.....	56	22	-33	10	0.30	.....	0.17	1	5.5	5	12	16	3	nw.	H. Glenn Sims.
Watford City	McKenzie	2,054	36	21.0	-5.2	59	22	-30	10	0.28	-0.41	0.19	25-26	3.8	5	15	12	4	sw.	J. C. Zeller.
Wildrose	Williams	2,258	19	.....	.....	.....	.....	.....	.....	0.14	-0.48	0.09	26	2.1	3	13	10	8	sw.	Jonathan Winkler.
Williston	Williams	1,878	70	19.6	-3.3	60	22	-29	10	0.23	-0.46	0.22	25-26	2.2	3	6	7	18	se.	U. S. Weather Bureau.
Average for Western Division				19.7	-6.1	64	22	-38	10	0.23	-0.52	0.26	19-20	3.1	4	13	10	8	nw.	
Average for the State				17.6	-6.3	64	22	-40	10	0.45	-0.34	0.50	6	5.4	5	18	10	8	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for March 1948

Station		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Ashley	Maximum																																	
	Minimum	-19	15	12	15	23	17	18	7	-2	0	24	28	34	29	30	35	33	41	41	32	44	55	39	35	31	27	41	44	39	38	32	28.3	
Bismarck Airport	Maximum	-11	-5	3	-3	-12	-1	-1	-9	-22	-31	-29	0	2	1	7	4	8	28	20	23	10	28	24	27	23	15	5	25	20	24	18	6.2	
	Minimum	-22	22	20	14	15	18	24	19	2	7	16	26	35	40	40	33	23	34	34	41	40	48	49	32	26	28	34	37	31	34	29	26.7	
Bottineau	Maximum	1	-3	-1	-13	-2	3	12	-8	-28	-35	-27	-5	11	8	18	6	-12	7	14	19	14	25	22	17	20	13	6	19	10	22	11	4.6	
	Minimum	20	15	18	15	20	20	15	8	3	2	29	40	45	50	36	36	32	52	45	33	46	62	48	40	35	25	49	52	40	39	40	32.6	
Carson	Maximum	-3	-6	3	2	-2	5	5	-11	-20	-31	-18	5	15	23	18	20	10	22	28	26	17	30	28	27	21	15	5	30	17	28	20	10.6	
	Minimum	5	7	5	16	22	19	5	2	-12	-3	20	28	40	36	28	28	26	36	35	37	36	44	31	24	21	23	41	28	35	26	32	23.3	
Crosby	Maximum	-17	-17	-8	-7	-6	-5	-7	-14	-22	-34	-33	-16	-2	10	9	2	-11	-4	19	12	12	14	24	8	11	7	4	9	15	4	-1.1		
	Minimum	19	17	14	15	22	20	20	4	-5	5	13	23	34	35	29	26	18	37	37	32	35	43	37	31	28	32	38	31	38	24	24.8		
Devils Lake	Maximum	-4	-4	-9	-12	-2	10	0	-14	-24	-32	-21	-3	6	13	8	4	-10	18	21	25	16	29	29	15	21	10	4	18	12	17	14	5.0	
	Minimum	19	12	11	21	23	19	14	7	-2	4	27	39	44	46	29	32	26	46	42	32	43	57	47	38	25	28	49	47	46	34	41	30.5	
Dickinson Airport	Maximum	-2	1	-2	-3	4	1	-4	-13	-24	-28	-11	12	18	26	21	20	10	20	28	18	17	32	28	24	19	12	8	26	15	21	15	10.0	
	Minimum	20	13	10	19	25	19	16	7	3	4	27	37	45	45	31	33	29	47	41	34	43	53	46	35	29	31	48	45	41	40	30.8		
Dunn Center	Maximum	-10	-11	2	-3	-2	-7	3	-11	-20	-31	-18	3	3	10	19	5	6	20	25	14	31	28	27	20	14	9	26	17	28	19	7.8		
	Minimum	26	20	10	18	20	22	26	10	-4	-7	12	20	33	34	28	29	27	37	42	35	39	40	38	40	48	33	32	41	36	43	32	27.7	
Fargo Airport	Maximum	11	0	-6	-14	-13	3	10	9	-26	-34	-24	-6	4	5	8	2	3	27	24	20	26	24	27	24	33	21	13	24	15	32	19	7.7	
	Minimum	25	21	11	16	21	22	18	15	1	-4	16	30	42	42	30	33	28	37	38	33	34	43	41	33	28	28	32	39	33	36	26	27.4	
Fessenden	Maximum	-5	-10	-12	-11	-4	-1	0	-13	-25	-33	-22	1	8	10	6	3	0	10	23	25	14	8	26	18	21	15	1	12	14	22	12	3.6	
	Minimum	29	22	19	18	23	22	22	13	4	-5	12	31	36	39	33	34	27	42	42	36	39	44	42	41	43	33	34	51	41	49	35	30.7	
Fullerton	Maximum	16	8	8	1	-8	14	13	5	-15	-26	-25	-3	3	9	15	11	9	20	24	29	28	32	27	29	20	12	24	23	31	22	11.9		
	Minimum	16	16	14	16	22	19	14	6	-4	1	25	30	40	43	32	35	19	43	38	39	41	51	40	30	25	27	38	41	36	34	30	27.6	
Garrison	Maximum	-8	-1	-2	-2	-2	2	-4	-12	-21	-28	-19	0	9	10	13	4	4	19	28	19	11	28	28	23	21	14	7	25	12	22	15	6.9	
	Minimum	26	21	19	23	28	25	23	8	0	10	33	42	47	48	35	34	31	49	42	35	43	59	49	45	32	29	52	45	56	42	42	34.6	
Golva	Maximum	-3	7	4	-2	8	11	2	-3	-14	-23	-6	14	20	28	24	25	17	23	30	25	23	33	28	30	21	17	15	28	31	25	14	14.6	
	Minimum	20	18	9	9	16	22	22	15	5	-2	13	22	25	28	29	26	21	35	39	37	36	40	41	38	32	32	31	36	28	35	27	25.6	
Grafton	Maximum	-12	0	-5	-8	-11	-4	14	-8	-17	-33	-32	-9	-2	0	12	5	-11	3	23	25	19	29	32	13	25	18	4	21	25	22	17	5.0	
	Minimum	26	14	6	12	16	22	24	5	7	-7	9	24	30	31	25	25	20	36	39	35	37	37	36	38	37	37	33	31	38	33	36	27	24.6
Grand Forks Airport	Maximum	1	-3	-11	-18	-13	-5	4	-14	-32	-38	-33	-10	-2	1	5	-2	-9	20	24	23	16	23	28	20	25	17	3	12	4	24	11	2.3	
	Minimum	23	24	14	13	18	18	21	-2	-4	-6	16	30	34	42	30	31	26	36	39	33	37	42	40	33	32	26	34	42	39	40	29	26.8	
Jamestown Airport	Maximum	-4	-5	-3	-12	-15	12	1	9	-22	-29	-27	3	10	9	11	4	3	26	22	27	20	29	25	22	24	16	5	25	19	22	18	7.3	
	Minimum	14	11	13	16	25	28	13	7	-4	3	21	31	44	43	34	35	25	38	39	40	37	45	39	23	22	29	40	37	36	30	30	27.2	
Kenmare	Maximum	-12	-13	-8	-17	-2	1	2	-12	-20	-26	-23	-3	8	21	12	4	-4	1	24	21	17	25	26	21	15	12	9	16	13	18	12	4.8	
	Minimum	22	20	9	19	21	1	24	23	12	-4	8	12	25	36	39	36	32	14	36	38	37	37	38	33	22	29	30	40	31	32	31	25.9	
Langdon	Maximum	-4	-9	-15	-14	-9	1	8	-17	-30	-40	-27	-12	5	-2	0	-20	0	21	17	15	12	23	27	10	17	13	1	21	4	19	13	0.4	
	Minimum	30	28	20	24	26	27	20	10	7	10	30	44	51	40	39	42	53	47	37	48	63	46	53	47	30	53	52	62	57	45	38.5		
Marmarth	Maximum	4	15	9	2	10	10	10	5	-10	-22	-13	5	17	25	26	26	16	26	27	27	22	36	29	31	23	18	15	27	27	26	17	15.4	
	Minimum	6	16	5	16	21	14	12	3	-8	3	19	28	39	27	32	18	38	36	31	37	46	38	29	24	24	38	38	34	34	28	24.5		
Minot Airport	Maximum	-10	-5	-12	-13	3	0	-4	-12	-22	-19	-13	4	20	18	12	8	1	21	23	17	16	31	26	21	19	10	7	19	11	17	12	6.3	
	Minimum	23	15	15	24	28	24	16	12	10	7	30	45	50	54	37	38	34	54	50	37	38	64	62	49	42	29	52	50	44	42	44	36.1	
Mott	Maximum	-2	-1	5	0	3	4	8	-7	-15	-24	-17	7	16	22	21	22	16	20	28	21	20	32	28	25	20	15	16	18	19	21	17	11.5	
	Minimum	18	9	5	13	16	21	22	2	-8	-4	9	21	27	28	25	21	14	35	39	34	35	38	37	30	30	30	27	31	28	31	28	22.2	
Pembina Airport	Maximum	-4	-6	-10	-10	-7	-2	2	-8	-24	-37	-30	-10	4	0	5	4	-19	13	26	23	18	24	28	9	23	12	3	13	9	22	10	2.6	
	Minimum	21	18	12	20	20	16	25	14	-5	-16	12	24	29	37	31	31	22	34	35	33	35	40	38	32	30	28	29	37	34	37	33	25.4	
Sharon	Maximum	-1	-5	-1	-6	-7	4	12	-14	-27	-36	-29	-5	6	7	14	0	-4	5	20	20	18	25	29	17	25	15	5	22	6	23	16	4.9	
	Minimum	19	20	15	19	20	23	18	6	0	-4	19	30	35	45	30	31	24	37	41	33	40	43	41	34	31	28	35	35	39	42	27	27.6	
Steele	Maximum	-5	-8	1	-7	-8	4	-13	-23	-35	-26	-5	3	7	2	11	-1	4	15	19	23	11	28	20	23	15	1	22	14	25	11	4.9		
	Minimum	28	20	21	16	23	22	26	22	-2	-5	14	25	34	39	36	33	30	39	43	40	42	41	37	38	34	32	44	37	43	36	30.1		
Valley City	Maximum	9	9	2	-10	-8	8	12	-9	-19	-29	-23	0	5	4	12	5	1	15	26	24	24	26	26	30	23	22	21	12	26	17	31	19	9.3
	Minimum	27	28	20	22	22	21	29	22	-2	-5	13	22	35	35	33	33	32	37	40	40	40	40	40	40	40	42	53	50	33	48	40	45	42
Wahpeton	Maximum	12	12	6	-5	-6	14	12	-2	-21	-34	-28	-9	0	8	12	3	4	23	28	23	29	27	27	27	27	28	21	16	22	18	30	23	10.6
	Minimum	11	15	13	24	19	19	17	7	-5	5	27	37	42	37	29	33	24	49	38	37	44	60	41	32	24	26	50	39	41	38	38	29.7	
Williston	Maximum	-18	0	2	4	11	-2	-5	-11	-22																								

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James		T					.08											.18		.08					T.							0.34
Cassilton	Red.																									T.							0.49
Cooperstown	Sheyenne							.16											.28		.05					T.	T.						0.40
Courtenay	James	.04					T.	.06	.06									T.	.33		.03					T.	T.						0.75
Devils Lake ^{1 5}	Devils Lake	.02	.01	T.				.13	.02									T.	.08	.04	.27					T.	T.				.21	T.	0.40
Edgeley	James			.02	T.	.02		.13	.02										.01	.06	.12						T.	.01					0.39
Edmore	Devils Lake	.05	.02	T.				.13	T.										T.	.03	.03					T.	T.			T.	.06		0.32
Ellendale	James	.05	.02	.01	.02			.29	.02										T.	.08	.14						T.	.23					0.91
Fargo ^{1 5}	Red.	.03	T.					.23	.06	T.									.03	.06	T.	.23				T.	.11	.06			.01	T.	0.87
Forman	Sheyenne	.04	T.					.20	T.	T.										.02		.13					T.	.03					0.42
Fullerton	James	.03	T.	T.	T.	T.		.32											.12		.11						.16	T.		T.		0.74	
Gackle	do																																
Grafton	Red.	.05						.05	.35									T.	T.		.26					T.	.01				.12		0.84
Grand Forks Airport ³	do	.06	.03	T.			.17	.04	T.									T.	.02	.03	.09						.15	T.		.03	T.	0.62	
Hankinson ²	do	T.	T.					.06													.05							.30	.30				0.7
Hannah	Pembina							.25										T.	.08											T.	T.	.24	0.76
Hillsboro	Red.	.08	T.				.40	.12												.12	.43						.10	.09			.24	.10	0.76
Jamestown Airport ³	James	.08	.01	.04		T.	.03	.08												.24	.02	.07				T.	.08			T.	.02	T.	1.30
Langdon	Pembina	.08					.08	.20												.03	.05					T.		.02		T.	.19	.02	0.67
Larimore	Red.						.50														.43						.06				.02		1.01
Lisbon	Sheyenne		T.				.11	.06											.18									.37				T.	0.83
Mayville	Red.	.06	T.	T.			.11	.03											T.	.36	.28						T.	.14			T.		0.98
McHenry	James	.03	.02				.05	.14																									

*Included in the next measurement.

[WBO, Minneapolis, 5-6-48-1200]

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Nat Hist

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

THE LIBRARY OF THE

JUN 21 1948

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes-inches)			Wind (true velocity)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	12-30 a. m.	6-30 a. m.	12-30 p. m.	6-30 p. m.		
Bismarck.....	30.52	8	29.38	10	11.4	36	e.	29	83	88	58	54	624
Devils Lake....	30.48	8	29.35	10	10.9	28	n.w.	10	88	70	73	62	841
Fargo.....	30.47	8	29.22	10	14.6	39	n.	11	82	85	65	52	621
Williston.....	30.51	8	29.37	23	9.0	34	e.	29	77	84	55	53	694

† And other dates.

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVII BISMARCK, N. D., APRIL 1948 No. 4

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GENERAL SUMMARY

April was a month of extremes. The south portion was unusually warm but temperatures in the north portion averaged much below the seasonal normal. Mean temperatures were in the 30's in the north and in the 40's over the south portion. Below zero readings were numerous over the north on the 2d and 8th. Heavy snowfall occurred over the north-central portion on the 7th. Amounts up to ten inches were reported and due to high wind, roads in this area were blocked for a day or two. Thunderstorms were general on the 23d and the showers over the central portion were heavy, mostly over one inch. The Missouri River ice continued to disintegrate until it finally broke at Bismarck on the 9th. After the ice break-up, the river stage dropped rapidly and there was no flooding in the Missouri River Basin. Severe flooding occurred in the Red, Sheyenne and James River Valleys. The flooding was unusually severe from Grand Forks northward, and the James River at Jamestown reached one of its highest stages, inundating about 40 city blocks. The water reached an all-time high level at Valley City on the Sheyenne and at the close of the month, this record crest was approaching Lisbon inundating thousands of acres of farm land. Damage over the state from floods will be more than five million dollars. The waters from Canada were beginning to approach Minot on the Souris River with a threat of flooding. By the close of the month about half of the spring wheat had been planted and pastures were green-
-ing nicely.—M.S.C.

TEMPERATURE

The mean temperature for the state was 40.3°, or 1.3° below the 1892-1948 average for April. The mean temperature for the eastern division was 40.5°; for the middle division, 39.1°; and for the western division, 41.4°. The highest mean temperature was 47.9° at Marmarth, and the lowest, 31.8° at Bowbells, making a range in mean temperature of 16.1°. The absolute range was 98°, from 85° at Carson, Fort Yates and Linton on the 17th, to -13° at Willow City on the 2d. The average daily deficiency in temperature for the state since January 1, 1948, is 2.0°.

PRECIPITATION

The average precipitation for the state was 2.15 inches, or 0.72 inch more than the 1892-1948 average for April. In the eastern division the average amount was 1.96 inches; in the middle division, 2.66 inches; and in the western division, 1.84 inches. The greatest monthly amount reported was 5.21 inches at Pettibone; the least was 0.75 inch at Trotters. The greatest amount recorded in any 24 consecutive hours was 2.32 inches at Towner on the 23d-24th. The accumulated excess in precipitation for the state since January 1, 1948, is 0.83 inch. The average snowfall was 5.0 inches.

COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation Averages					Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy
1892...	37.6	75	-2	2.58	3.09	2.29	2.65	6.3	7	10	6	14
1893...	34.3	77	-8	2.45	1.56	1.09	1.70	7.8	6	7	9	14
1894...	42.8	92	12	3.66	2.93	2.50	3.03	4.4	9	8	10	12
1895...	49.6	87	10	2.10	2.38	2.20	2.23	0.0	5	13	8	9
1896...	40.1	92	2	5.50	3.73	2.18	3.80	5.1	9	9	8	13
1897...	40.8	93	-7	0.80	1.20	1.24	1.08	1.1	5	12	8	10
1898...	41.9	87	-4	1.38	1.36	1.40	1.38	0.5	5	14	9	7
1899...	38.0	86	-22	1.46	1.31	1.31	1.36	6.3	6	12	10	8
1900...	49.3	93	11	0.75	0.75	1.05	0.85	T.	3	20	6	4
1901...	44.5	92	10	1.40	0.72	0.82	0.98	0.3	4	12	9	9
1902...	40.2	87	-2	1.35	0.88	0.95	1.06	2.9	3	12	8	10
1903...	42.5	83	8	1.67	1.10	0.92	1.23	2.7	5	16	6	8
1904...	37.4	91	2	2.22	1.21	0.72	1.38	8.1	5	13	5	12
1905...	40.2	83	3	1.04	0.38	0.11	0.51	3.7	3	15	8	7
1906...	46.7	88	8	1.96	1.06	1.48	1.50	1.3	5	14	7	9
1907...	31.9	80	-6	0.77	0.36	0.44	0.52	4.2	4	10	9	11
1908...	43.9	91	-19	1.12	1.53	1.91	1.52	5.9	5	16	6	8
1909...	34.2	80	3	0.55	0.71	0.64	0.77	5.1	6	10	9	11
1910...	48.0	96	4	1.52	1.03	1.56	1.37	2.9	4	16	8	6
1911...	41.5	90	-5	2.12	0.80	0.64	1.19	6.3	5	15	6	9
1912...	44.4	88	2	2.61	2.32	2.22	2.35	1.7	7	14	8	8
1913...	46.8	94	11	1.00	0.70	0.23	0.64	2.4	4	16	6	8
1914...	40.9	84	2	2.49	1.31	0.58	1.46	2.8	6	9	10	11
1915...	50.3	99	5	1.42	0.98	0.68	1.03	T.	5	15	8	7
1916...	39.2	79	-6	1.70	1.07	1.54	1.44	2.9	5	10	10	10
1917...	37.2	73	5	1.89	1.67	1.49	1.68	5.6	7	9	9	12
1918...	41.4	81	0	2.38	1.87	2.28	2.18	3.0	7	12	8	10
1919...	42.3	79	6	1.45	1.40	1.72	1.52	6.2	6	11	9	10
1920...	32.1	63	-11	0.73	0.67	1.12	0.84	2.1	5	13	8	9
1921...	41.1	91	1	1.84	2.07	1.40	1.77	3.8	7	14	7	9
1922...	42.3	89	-2	1.17	0.79	0.79	0.92	2.3	6	10	9	11
1923...	38.7	89	-15	1.22	1.63	1.51	1.45	7.2	5	13	8	9
1924...	39.3	84	6	3.94	2.31	1.35	2.53	7.5	9	8	9	13
1925...	47.8	85	10	2.21	1.37	1.22	1.60	T.	6	11	10	9
1926...	42.8	98	-4	0.17	0.34	0.32	0.28	0.9	3	17	8	5
1927...	41.4	95	7	2.05	1.46	1.67	1.73	2.3	7	10	8	12
1928...	35.9	84	-6	0.92	0.88	0.92	0.91	5.0	5	12	10	8
1929...	41.5	85	-9	1.68	1.36	0.88	1.31	3.4	6	12	9	9
1930...	47.3	86	8	1.16	1.14	1.45	1.25	0.5	6	14	7	9
1931...	44.1	87	3	0.75	0.37	0.18	0.43	0.7	2	18	8	4
1932...	44.1	79	0	2.50	2.09	1.84	2.14	0.7	8	9	9	12
1933...	40.0	84	2	1.44	1.20	1.35	1.33	7.3	5	11	9	10
1934...	43.7	95	7	0.75	0.34	0.24	0.44	1.9	3	15	8	7
1935...	38.4	83	0	2.62	1.75	1.42	1.93	3.6	8	9	9	12
1936...	35.6	87	-15	0.53	0.26	0.37	0.39	0.5	4	14	10	6
1937...	40.7	79	2	3.44	1.56	1.06	2.02	5.8	8	8	9	6
1938...	42.8	90	1	1.68	0.96	0.64	1.09	0.1	5	11	10	9
1939...	41.6	90	-1	0.93	0.66	1.03	0.87	0.5	6	12	9	9
1940...	37.8	78	-9	1.84	2.36	2.45	2.22	4.1	8	7	10	13
1941...	44.1	82	6	3.05	2.13	1.71	2.30	1.6	13	6	9	15
1942...	44.9	90	-6	2.12	1.75	2.01	1.96	3.3	7	11	9	10
1943...	44.9	83	11	1.46	1.56	1.42	1.48	0.1	5	15	10	5
1944...	40.8	77	-11	0.74	0.83	0.84	0.80	0.2	4	14	7	9
1945...	38.0	80	6	1.52	0.82	0.97	1.10	4.5	6	7	12	11
1946...	48.2	87	9	0.96	0.58	0.48	0.67	2.4	4	14	11	6
1947...	39.9	90	0	1.84	1.23	1.36	1.48	6.8	8	8	11	11
1948...	40.3	85	-13	1.96	2.66	1.84	2.15	5.0	6	10	12	8
Period	41.6	99	-22	1.73	1.34	1.23	1.43	3.2	6	12	9	9

Climatological Data for April 1948

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	5	37.7	.....	74	21	-3	9	1.87	.....	1.19	7	12.3	7	13	11	6	se.	Albert Thoren.
Carrington	Foster	1,579	51	37.4	-2.2	72	17	4	2	3.30	+1.97	2.16	23-24	3.0	6	15	8	7	.....	Soo Line Agent.
Casselton	Cass	934	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ashton Lockhart
Cavalier	Pembina	894	41	36.6	-2.6	70	21	1	2	4.15	+2.76	1.68	7-8	16.4	9	8	14	8	nw.	City Light & Power Co.
Colgate	Steele	1,180	15	.....	.....	.....	.....	.....	.....	.....	-0.15	1.02	7	1.0	4	8	17	5	se.	O. M. Jensen.
Cooperstown	Griggs	1,428	52	39.3	-1.0	73	17	-2	2	1.29	-0.10	0.90	7	4.0	4	6	12	12	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	18	.....	.....	.....	.....	.....	.....	.....	-0.09	0.88	10	4.5	7	8	12	10	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	73	36.9	-1.9	70	21	2	2	2.80	+1.28	1.01	23	9.6	8	6	12	12	se.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	48	45.4	+2.8	80	17	10	2	1.36	-0.39	0.89	7	0.1	10	12	8	10	.....	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	25	36.4	-2.9	69	21	-4	2	3.60	+2.34	1.49	23-24	7.5	7	15	9	6	ne.	Mike Davis.
Ellendale	Dickey	1,457	50	46.2	+3.5	80	17	13	2	1.56	-0.30	0.86	7	1.1	9	12	8	10	nw.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	68	44.2	+3.6	76	17	8	2	2.44	+0.26	1.18	6-7	1.2	10	7	8	15	nw.	U. S. Weather Bureau.
Forman	Sargent	1,249	57	47.0	+3.0	79	17	12	2	1.54	-0.47	0.76	24	0.3	6	10	9	11	nw.	Art Waterman.
Fullerton	Dickey	1,439	51	46.4	+3.7	80	17	13	2	1.55	-0.59	0.94	6-7	0.6	8	7	13	10	s.	F. O. Alin.
Gackle	Logan	1,951	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tony Martin.
Grafton	Walsh	827	57	37.8	-2.8	79	21	0	9	2.56	+1.22	0.70	7	10.0	7	10	14	6	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	58	40.2	-1.1	72	24	1	2	1.89	+0.23	1.02	7	10.4	12	7	6	17	nw.	University of N. Dak.
Grand Forks Aprt. 2 1/2 mi. W	Grand Forks	834	8	39.7	.....	72	21	0	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	20	44.4	+0.9	76	17	11	2	2.12	+0.11	0.64	23-24	1.5	8	11	5	14	.....	Soo Line Agent.
Hannah	Cavalier	1,568	55	33.6	-4.3	69	21	-9	2	2.21	+1.09	1.03	25-26	5.4	5	4	22	4	sw.	A. E. Prior.
Hillsboro	Trall	901	43	42.0	-0.2	75	17	3	2	1.84	-0.04	1.21	7-8	8.2	9	8	18	4	se.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	57	43.2	+1.5	79	17	9	2	1.24	-0.46	0.65	6-7	0.5	7	6	15	9	ne.	N. Dak. State Hospital.
Jamestown Airt. 2 mi. NE.	Stutsman	1,494	8	41.8	.....	79	17	6	2	1.54	.....	0.73	6-7	0.7	11	5	13	12	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	8	38.4	.....	73	17	-2	2	1.91	.....	0.74	23	0.5	6	5	12	13	nw.	U. S. Wildlife Refuge.
LaMoure	LaMoure	.....	2	45.8	.....	80	17	10	2	1.99	.....	1.62	7	1.0	7	8	19	3	ne.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	53	35.1	-2.5	70	21	-10	2	2.63	+1.40	0.90	23	7.0	6	10	7	13	nw.	V. Sturlaugson.
Larimore	Grand Forks	1,134	56	37.2	-3.0	70	21	2	2	2.29	+0.69	1.42	7	13.0	8	3	18	9	nw.	Jesse P. Phillips.
Lisbon	Ransom	1,091	45	44.4	+2.3	81	17	9	2	1.41	-0.52	0.51	6	0	10	14	4	12	se.	Robert M. Jodsaas.
Mayville	Trall	975	53	41.2	-1.3	72	17	1	2	1.75	+0.20	1.27	7-8	1.9	10	8	16	6	nw.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	26	36.3	-4.3	71	17	-2	2	2.62	+1.25	0.77	7	13.2	9	10	12	8	se.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	37	45.8	+2.2	77	17	8	2	2.19	+0.20	0.98	7-8	1.0	7	15	9	6	s.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	1	35.7	.....	73	21	-3	2	1.79	.....	0.69	25	6.0	8	6	10	14	nw.	Harold Feldner
Oakes	Dickey	1,318	20	46.1	+3.3	81	17	13	2	1.05	-0.82	0.80	7	0	4	17	6	7	s.	C. M. Hagen.
Park River	Walsh	995	45	35.8	-4.7	69	21	-2	2	1.90	+0.58	1.04	25	8.3	6	13	10	7	se.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	75	35.5	-2.0	70	21	-2	2	1.00	-0.26	0.54	25	1.7	8	4	16	16	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	18	35.6	.....	66	21	-5	2	1.78	+0.39	0.88	7	8.5	8	11	13	6	n.	T. C. Overland.
Sharon	Steele	1,516	25	37.8	-1.8	68	17	-2	2	2.68	+1.20	1.25	6-7	6.5	7	15	8	7	se.	Hugh Lyon.
Valley City	Barnes	1,229	44	44.0	+1.6	78	17	7	2	1.25	-0.48	1.01	6-7	0.2	4	12	13	5	se.	Miss I. C. Robertson.
Wahpeton	Richland	962	57	46.8	+2.6	75	17	1	2	1.75	-0.33	0.79	24	0.6	10	8	14	8	se.	State School of Science.
Average for Eastern Division				40.5	-0.7	81	17	-10	2	1.96	+0.28	2.16	23-24	4.6	8	9	12	9	nw.	
Middle Division																				
Ashley	McIntosh	2,025	53	.....	.....	70	21	-5	2	1.69	.....	0.87	23-24	4.9	8	4	16	10	ne.	Raymond R. Spitzer
Belcourt	Rolette	1,960	4	32.8	.....	70	21	-5	2	1.69	.....	0.87	23-24	4.9	8	4	16	10	ne.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	46	36.4	-4.3	75	21	0	2	2.26	+1.07	0.72	7	11.0	6	12	10	8	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	74	44.7	+1.6	82	17	13	2	2.67	+1.48	1.81	23	0.5	5	3	14	13	e.	U. S. Weather Bureau.
Bismarck Airt. 2 1/2 mi. SE.	Burleigh	1,650	9	44.2	+3.8	84	17	10	2	3.05	+1.53	1.54	23	0.8	9	3	14	13	e.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	57	36.6	-2.4	73	21	-1	2	2.38	+1.54	1.07	23-24	4.5	7	4	18	8	se.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	24	39.3	-2.0	75	22	6	2	3.30	+2.00	1.58	7-8	11.5	5	12	10	8	e.	M. O. Anderson.
Carson, 2 1/2 miles SW	Grant	2,500	37	45.4	+2.9	85	17	8	9	1.12	-0.23	0.59	30	0.7	10	7	14	9	nw.	J. W. Evans.
Center	Oliver	2,100	11	40.7	.....	82	17	7	8	1.98	.....	0.73	23	1.0	4	6	17	7	nw.	Fred L. Heinz.
Drake	McHenry	1,634	19	37.1	-3.3	72	17	5	2	4.09	+2.92	2.05	23-24	11.0	6	16	13	1	se.	Geo. A. Pauls.
Dunseith, 2 miles NNE	Rolette	1,682	53	34.8	-4.7	72	21	0	2	1.70	+0.86	0.50	24	3.5	6	12	7	11	s.	State Tuberculosis San.
Eckman	Bottineau	1,500	43	37.2	-3.2	74	21	-8	2	2.87	+1.96	1.80	23-24	7.0	6	11	12	7	nw.	E. R. Sherman.
Fessenden	Wells	1,610	37	38.0	-2.4	70	21	1	2	2.68	+1.36	1.01	23-24	1.0	5	9	14	7	w.	John V. Zuber.
Fort Yates	Sioux	1,670	49	46.8	+2.0	85	17	10	2	2.48	+1.33	0.75	25	1.5	8	15	6	9	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	28	36.7	-4.1	76	21	2	2	2.24	+0.99	1.24	23-24	8.5	5	15	3	12	se.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	72	40.4	-1.7	79	17	6	2	2.80	+1.64	1.32	23-24	6.0	4	5	12	13	n.	Mae H. Vorachek.
Granville	McHenry	1,504	42	36.1	-4.7	75	22	0	9	2.65	+1.71	2.25	23-24	3.5	6	20	5	5	nw.	Fred Roble.
Hansboro	Towner	1,597	41	33.0	-5.6	69	21	-6	2	1.24	-0.01	0.52	23-24	5.0	7	4	19	7	nw.	W. E. Discher.
Harvey, 3 miles SE	Wells	1,596	46	.....	.....	.....	.....	.....	.....	.....	+1.43	0.92	23-24	5.0	5	11	10	9	nw.	H. J. Reynolds.
Leeds	Benson	1,515	8	36.0	.....	71	21	-3	2	2.50	.....	1.24	23	6.0	5	9	14	7	s.	John Dulmage.
Linton	Emmons	1,711	32	46.4	+3.6	85	17	12	2	3.27	+1.99	1.10	23-24	0.4	8	8	10	12	nw.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	34	36.0	-4.6	67	21	-8	2	2.11	+0.99									

Climatological Data for April 1948—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Dickinson Airpt., 5½ mi. S.	Stark	2,587	8	43.0	.....	81	17	2	8	1.92	.....	1.14	30	2.4	7	7	10	13	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	50	41.6	+0.1	80	17	0	8	2.05	+0.79	1.35	23-24	9.0	5	6	14	10	se.	O. T. Evenson.
Elbowoods	McLean	2,082	66	42.9	-0.1	79	22	0	8	3.15	+2.14	1.08	6-7	12.0	5	11	14	5	nw.	H. W. Case.
Epping	Williams	2,224	40	41.2	-0.5	76	22	-2	8	1.03	+0.04	0.75	30	2.0	3	20	6	4	se.	T. Beachler.
Fairfield, 9½ miles N.	Billings	2,650	20	.....	.....	.....	.....	.....	.....	2.93	+1.71	2.01	30	6.5	3	15	9	6	nw.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	8	44.4	+2.2	79	17†	5	8	0.92	-0.26	0.46	6-7	2.7	7	8	13	9	nw.	Chester K. Puda.
Grenora	Williams	2,114	40	40.1	+0.8	74	21†	2	8	1.23	+0.20	0.52	30	6.0	3	19	5	6	e.	L. D. Nielson.
Halliday	Dunn	2,073	7	.....	.....	.....	.....	.....	.....	2.89	.....	1.40	23	6.5	5	12	13	5	se.	John Kisse.
Hettinger	Adams	2,675	42	47.1	+4.2	84	17	9	8	0.87	-0.19	0.39	29-30	0.8	4	11	12	7	nw.	Edgar Martin.
Kenmare	Ward	1,799	17	35.4	-4.8	74	21†	1	8	2.72	+1.80	1.54	23-24	12.0	5	4	9	17	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	40	47.9	+4.7	82	17	15	8	1.11	+0.04	0.47	18-19	2.3	8	10	9	11	nw.	S. P. Grane.
Medora, 1½ mi. W.	Billings	2,271	34	45.6	.....	82	17	-2	8	0.87	-0.28	0.50	30	3.0	3	20	4	6	w.	Harry Roberts.
Mott	Hettinger	2,424	42	45.4	+3.1	84	17†	5	8	2.00	+0.78	1.34	30	0	7	14	8	8	nw.	Northern Pacific Agent.
New England	Hettinger	2,621	57	44.1	+1.7	82	17	6	8	1.18	-0.02	0.50	30	0.2	9	7	15	8	nw.	Alfred Hasel.
Parshall	Mountrail	1,929	34	39.7	+0.7	76	22	3	8	1.89	+0.82	0.85	23-24	4.0	7	5	21	4	nw.	C. E. Shubert.
Portal	Burke	1,954	35	32.4	-8.2	70	21	-8	8	1.57	+0.63	0.90	7	12.0	4	8	8	14	e.	U. S. Customs Service.
Powers Lake	Burke	2,205	44	35.6	-4.4	72	21	-4	8	1.65	+0.51	0.70	24	6.0	4	5	16	9	se.	E. J. Lewis.
Richardton, 1½ miles N.	Stark	2,467	33	45.6	+4.2	82	17	6	8	2.76	+1.53	1.22	30	3.2	6	12	8	10	se.	Assumption Abbey.
Ryder	Ward	2,108	20	.....	.....	.....	.....	.....	.....	3.43	+2.32	2.15	22-23	4.0	5	13	11	6	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	23	38.6	-3.1	75	21†	0	8†	1.13	+0.01	0.35	7-8	7.7	4	9	18	3	e.	H. J. Bugge.
Stanley	Mountrail	2,258	11	35.8	.....	73	21†	-1	8	3.20	.....	1.74	6-7	13.0	4	10	10	10	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	20	.....	.....	.....	.....	.....	.....	1.84	+0.69	0.95	23-24	7.0	6	12	11	7	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	20	.....	.....	.....	.....	.....	.....	2.40	+1.42	1.00	23†	6.0	3	12	9	9	se.	L. A. Simon.
Trotters	Golden Valley	.....	23	.....	.....	.....	.....	.....	.....	0.75	-0.30	0.40	7	6.0	2	2	24	4	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	8	41.2	.....	78	22	3	8	1.85	.....	0.68	22-23	6.4	6	8	13	9	e.	H. Glenn Sims.
Watford City	McKeuzie	2,084	36	43.7	+2.3	80	22	0	8	2.49	+1.32	1.24	30	12.8	4	9	18	3	e.	J. C. Zeller.
Wildrose	Williams	2,258	19	.....	.....	.....	.....	.....	.....	1.41	+0.45	0.86	8	10.0	4	13	9	8	nw.	Jonathan Winkjer.
Williston	Williams	1,878	70	41.8	-0.2	77	22	-3	8	2.45	+1.25	1.24	30	7.5	4	6	10	14	e.	U. S. Weather Bureau.
Average for Western Division				41.4	0.0	84	17†	-8	8	1.84	+0.61	2.15	22-23	5.5	5	11	11	8	nw.	
Average for the State				40.3	-1.3	85	17	-13	2	2.15	+0.72	2.32	23-24	5.0	6	10	12	8	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
† Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for April 1948																																		
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Ashley	Maximum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ashley	Minimum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bismarck Airport	Maximum	32	36	63	44	58	47	39	36	65	44	39	43	56	63	68	61	84	68	56	68	77	78	60	62	51	59	59	71	63	50	56.3		
Bismarck Airport	Minimum	20	10	32	31	24	30	20	15	25	29	23	21	26	28	36	28	38	40	41	28	41	41	63	50	41	42	36	34	38	43	32.1		
Bottineau	Maximum	27	25	38	39	34	39	38	25	35	36	34	37	40	39	47	46	65	63	49	67	73	72	70	52	49	44	43	60	60	56	47.1		
Bottineau	Minimum	14	-1	15	15	16	17	20	9	12	28	19	12	22	27	25	27	35	36	37	32	41	45	48	38	30	34	32	26	30	38	26.0		
Carson	Maximum	33	42	75	56	59	50	40	46	60	48	41	39	60	65	70	64	85	72	57	66	76	80	70	65	58	56	62	70	66	57	59.6		
Carson	Minimum	23	15	31	31	25	25	20	8	28	33	21	21	22	25	39	21	40	36	39	28	41	44	52	45	42	34	28	39	37	42	31.2		
Crosby	Maximum	22	29	44	31	26	36	19	27	33	33	31	29	44	37	42	57	54	46	54	70	71	66	53	59	57	44	51	60	62	47	44.1		
Crosby	Minimum	7	1	12	18	12	14	15	-3	0	7	19	5	7	23	23	24	28	32	29	32	29	30	36	40	35	35	28	27	33	35	21.1		
Devils Lake	Maximum	23	25	41	36	36	36	33	25	36	39	32	35	41	38	43	47	65	62	67	65	70	65	58	58	48	49	47	54	50	57	45.7		
Devils Lake	Minimum	6	2	18	28	19	23	19	9	7	26	20	13	20	29	28	27	39	41	37	34	44	47	48	48	39	36	31	32	36	.....	28.1	
Dickinson Airport	Maximum	34	43	70	48	58	50	32	42	56	46	37	37	59	63	64	69	81	65	57	65	74	80	69	65	60	52	58	70	67	48	57.3		
Dickinson Airport	Minimum	14	15	32	24	24	25	14	2	26	25	21	21	24	28	29	21	41	36	35	29	37	38	49	43	35	30	31	34	40	34	28.7		
Dunn Center	Maximum	28	41	69	47	58	47	25	31	41	39	37	43	59	61	64	68	80	64	60	67	74	79	69	65	60	56	57	71	63	44	55.6		
Dunn Center	Minimum	22	12	21	30	20	26	21	0	4	17	23	16	23	26	34	21	32	35	38	26	33	35	44	48	41	33	34	31	39	42	27.6		
Fargo Airport	Maximum	24	28	56	52	50	51	41	29	47	60	34	43	46	51	64	51	76	68	58	68	72	65	68	75	66	55	59	58	58	62	54.5		
Fargo Airport	Minimum	12	8	28	32	29	40	29	23	22	32	28	25	28	33	32	30	43	46	44	31	42	49	48	53	50	44	35	32	32	40	34.0		
Fessenden	Maximum	26	26	40	39	32	36	34	39	43	40	32	41	40	42	48	53	63	60	57	66	70	69	60	58	55	49	52	59	57	54	48.0		
Fessenden	Minimum	15	1	16	26	19	20	19	19	24	21	23	12	11	17	26	28	40	37	35	32	41	41	49	50	40	36	37	32	33	39	28.0		
Fullerton	Maximum	37	34	71	64	56	54	45	36	59	63	41	38	52	59	71	58	80	72	56	67	72	67	77	71	71	62	63	70	63	52	59.4		
Fullerton	Minimum	19	13	26	32	25	33	32	20	22	32	26	19	27	30	34	34	42	44	43	30	33	52	52	48	48	40	35	32	36	43	33.4		
Garrison	Maximum	28	31	49	39	42	38	30	32	44	38	35	41	55	53	62	61	79	68	61	68	73	77	58	62	55	52	56	68	58	48	52.0		
Garrison	Minimum	18	6	24	27	21	24	18	7	14	27	22	17	23	30	29	24	34	39	37	31	37	40	52	43	40	38	35	33	36	42	28.9		
Golva	Maximum	33	49	70	52	55	54	41	42	52	45	38	38	61	62	66	74	79	63	59	65	75	79	64	60	61	52	69	73	70	57	58.3		
Golva	Minimum	22	18	38	30	35	27	17	5	24	34	18	22	25	30	25	31	35	34	37	31	49	32	46	42	32	32	29	30	41	47	30.6		
Grafton	Maximum	28	24	39	39	37	33	35	31	35	40	37	37	39	41	44	44	61	61	59	64	79	70	61	65	63	50	50	50	53	61	47.7		
Grafton	Minimum	3	2	16	33	18	23	26	16	0	20	25	15	15	33	28	26	38	44	32	30	33	37	48	52	45	39	39	33	32	36	27.9		
Grand Forks Airport	Maximum	25	28	46	40	37	38	39	25	43	42	33	38	41	41	46	47	67	62	58	65	72	64	63	70	68	51	60	51	55	61	48.9		
Grand Forks Airport	Minimum	7	0	22	31	24	26	25	15	11	31	26	21	27	31	30	28	41	44	37	32	39	50	48	52	48	41	36	23	31	37	30.5		
Jamestown Airport	Maximum	31	29	55	41	48	44	38	29	46	48	37	42	49	53	67	55	79	68	59	68	70	70	70	62	54	51	57	64	55	54	53.1		
Jamestown Airport	Minimum	13	6	26	30	23	31	20	16	19	28	24	18	26	29	31	27	40	40	38	30	36	45	60	50	43	35	34	30	34	42	30.5		
Kenmare	Maximum	27	30	47	40	30	35	23	29	31	36	35	30	46	43	50	53	65	54	56	68	74	74	58	58	47	47	54	60	53	45	46.6		
Kenmare	Minimum	18	4	13	24	15	18	16	1	7	11	20	7	14	28	23	25	38	29	34	37	37	38	43	34	38	32	28	33	36	24.3			
Langdon	Maximum	33	27	37	38	33	34	25	31	34	37	35	40	38	39	40	43	61	69	57	64	70	70	58	69	55	46	48	56	55	58	46.0		
Langdon	Minimum	2	-10	10	22	13	16	15	10	4	18	20	13	18	30	25	22	35	37	32	30	33	40	45	48	40	35	35	27	28	32	24.2		
Marmarth	Maximum	43	53	74	52	58	55	42	48	67	62	45	40	62	67	70	73	82	70	53	62	65	66	77	80	72	65	62	56	60	74	67	62.3	
Marmarth	Minimum	37	20	38	34	27	26	23	15	20	34	25	25	25	35	40	30	35	42	38	30	32	55	50	40	30	40	27	40	47	45	33.5		
Minot Airport	Maximum	28	28	47	35	34	33	26	27	35	34	32	32	32	45	38	46	54	68	54	58	67	72	75	54	57	45	47	51	62	53	46.2		
Minot Airport	Minimum	14	6	20	25	20	18	4	6	24	18	9	22	27	23	25	42	36	32	38	46	38	50	42	39	37	33	30	35	41	27.3			
Mott	Maximum	42	45	77	65	58	53	46	45	62	57	43	39	60	68	70	84	82	56	66	78	84	75	64	62	59	57	72	73	62	.....	62.4	
Mott	Minimum	24	14	31	31	25	21	20	6	30	31	18	21	23	24	31	25	35	34	28	24	36	32	47	42	41	30	25	28	38	41	28.5		
Pembina Airport	Maximum	21	30	41	36	34	34	23	37	39	33	33	41	35	41	42	58	58	60	64	70	57	57	63	62	47	44	44	64	69	.....	44.6	
Pembina Airport	Minimum	4	-2	20	29	22	21	23	9	8	27	24	21	23	28	28	23	39	41	37	34	33	50	47	50	44	38	36	32	31	36	28.4		
Sharon	Maximum	28	24	40	48	35	35	33	26	37	40	32	40	39	41	51	46	68	60	55	65	68	66	58	62	57	62	62	58	53	60	47.9		
Sharon	Minimum	8	-2	12	30	20	23	24	15	7	23	21	12	20	31	29	25	38	37	35	32	40	43	46	50	43	36	37	31	30	34	27.7		
Steele	Maximum	29	33	63	56	43	47	39	35	54	47	36	42	52	59	68	59	84	72	57	67	75	74	59	59	54	55	58	68	58	58	65.3		
Steele	Minimum	17	1	15	28	27	27	22	12	19	27	22	14	20	27	26	29	35	37	39	31	41	43	50	44	40	37	34	29	39	40	29.2		
Valley City	Maximum	29	27	53	61	44	43	38	35	45	51	36	42	48	50	68	56	78	78	69	68	70	70	78	73	71	67	58	63	63	69	55.9		
Valley City	Minimum	15	7	22	32	25	25	23	15	18	33	26	21	26	31	29	39	43	40	33	39	45	50	52	61	62	64	30	34	41	.....	32.1	
Wahpeton	Maximum	29	30	62	60	54	53	45	44	49	67	47	41	48	69	62	62	75	74	70	66	70	68	70	75	69	65	64	63	62	58	58.7		
Wahpeton	Minimum	16	10	27	35	28	37	23	20	36	28	21	30	31	35	32	42	47	47	47	47	47	51	50	51	58	44	3						

Daily Precipitation for April 1948

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Eastern Division																																		
Carrington 2	James							.10	.15																.08	2.16	.65	.16					3.30	
Casselton	Red.																								.08	.22	.09						1.29	
Cooperstown	Sheyenne	T.					T.	.90			T.														.08	.12	.08	.12	.04				1.34	
Courtenay	James	.03						.07			.88														.01	.07	.73	.04	T.				2.80	
Devils Lake 15	Devils Lake	.05		T.				.87	.01													.02	T.	1.01	.07	.12	.01					1.36		
Edgeley	James	T.				T.		.89	.01		.02													.15	1.14	.35	.84	.28		.02	.15	3.60		
Edmore	Devils Lake						T.		.80									.04			.02			.01	.11	.12	.01					1.56		
Ellendale	James	T.					.04	.86			.04		.04											.04	.20	.02					.21	2.44		
Fargo 15	Red.	.07					.05	1.14	.02		.15							.01	T.	T.		T.	.67	.16	.14	.03	T.	T.				1.54		
Forman	Sheyenne	T.					.07	.55	T.		T.		.02												.76	.02						.12	1.54	
Fullerton	James	.01					.10	.94			.03		T.								.10			.14	T.	.01					.22	1.55		
Gackle	do																																	
Grafton	Red.	.01						.70	.67		T.								.04				.06			.58	.50						2.56	
Grand Forks Airport 8	do																								.02	.64	.37						2.12	
Hankinson 2	do			.03				.07	.47	.20					T.							.32			.03	.50	.78	.25					2.22	
Hannah	Pembina								.48												.20				.03	.15	.15	T.					1.84	
Hillsboro	Red.	.05						.94	.27		.07								T.		.02		.16		.03	.15	.15	T.					2.29	
Jamestown Airport 8	James	.03					.04	.13	.66	T.	.01								.03				T.	.26	.02	.22	.02				.12		1.54	
Langdon	Pembina							.40	.38							.05									.90	.70	.20						2.63	
Larimore	Red.	.03					.10	1.42															.01	.02	.01	.64	.01						2.29	
Lisbon	Sheyenne					.01	.51	.31			.12					.02			.01				.01	.20	.08						.14		1.41	
Mayville	Red.	.16					.04	1.19	.03		.11												.01	.03	.07	.03			.03				1.75	
McHenry	James	.02					.01	.77	.68		.09													.57	.05	.22	.21						2.62	
McLeod	Sheyenne						.07	.90	.08		T.	.06										T.			.06	.68	.34						2.19	
Oakes 2	James							.80	.12			.10													.03	.03							1.05	
Park River	Red.	.02						.52	.15										.02						.15	T.	1.04						1.90	
Pembina Airport 3	do	T.				T.	T.	.16	.03		T.	T.		T.	T.	.04			.15	T.			.01	.05	T.	.54	.02						1.00	
Petersburg	do	.03						.88	.35															.08	.15	.17	.10			.02			1.78	
Sharoll	do	.02						1.25	.25		T.														.01	.03	1.10						2.68	
Valley City	Sheyenne	.04						1.01	.12										T.			T.			.08								1.25	
Wahpeton	Red.	.02					.18	.38	.03		.03	T.	.03	.01		.02						.26		T.		.79							1.75	
Middle Division																																		
Ashley 3	Missouri																																2.26	
Bisbee	Devils Lake	.13						.72															T.	.55	.13	.37	.36						3.05	
Bismarck Airport 15	Missouri	.01	T.			T.	.02	.12			.06										.01				T.	.51					.50		2.38	
Bottineau 2	Mouse	.04				T.		.43	.05										T.	T.				.37	1.07	.34	.08						3.30	
Butte	do	T.						1.42	.16															.34	1.18	.20					T.		2.38	
Carson	Heart	.02					T.	.05	.03		.05										.02			.15	.05	.05	.11				.59		1.12	
Center	Missouri	T.					T.	.68																.73		.10							1.98	
Drake 2	Mouse	.01						.52	.85																2.05	.41	.25						4.09	
Dunkelth	do	.04				T.		.30				T.												.40	.50	.40	.06	T.					1.70	
Eckman	do	.07						.30																T.	1.80	.25	.05						2.87	
Fessenden	James				T.			.07								.96								.47	.54	.64							2.68	
Fort Yates	Missouri	.10					.20	.26	T.				.10								.30			.40		.75					.37		2.48	
Foxholm	Mouse	T.	T.			T.		.49	.08		T.													.40		.24		T.					.03	2.24
Garrison 3	Missouri	T.	T.			T.		.63																.91	.53						.73		2.80	
Granville	Mouse	T.						.21	.08															.60	1.65	.09	.33	.11		T.			2.65	
Hansboro	Devils Lake	.02						.17	.09										T.	T.				.32	.20	.33							1.24	
Linton	Missouri	.05						.30	.02		.07													.35	1.10	.85							3.27	
Laddock	Sheyenne	.07			T.			.86																	.32	.20	.33						2.11	
Mandan 2	Missouri	.04	T.				T.	.46	.02			.06										T.		.82	T.	.36						.53		2.82
Max 2	do							.06	.70															.01	1.50	.05	T.						2.32	
McClusky	do	T.			.02			.94	.16															.10	1.22	.30	.20	.02					2.98	
Minot Airport 3	Mouse	.01	T.	T.			T.	.15			T.	T.	T.	.01					.02				T.		.25	1.25	.01	T.				.35		3.03
Mohall	do	T.	T.					.69	.16		.02								T.					.93	.80	.02	.02						2.67	
Napoleon	Missouri	.02	T.				.03	.35	T.		.05													.15	.79	.72	.02						44	2.59
New Salem	Heart	T.					T.	.18	.05															.01	.33	.06	T.						1.02	
Pettibone	James	.04						.73	.12		.05													2.30	.66	1.16							15	5.21
Rolla	Devils Lake	.12					T.	.95	.10					T.			.01			.03	.02			.56	.32	.36	.17						2.64	
Rugby	Mouse	.05						.30	.34														T.		.86	.22	.20							1.97
Selfridge	Missouri	T.	T.				.35	T.					.30								.25				.75	.95						.70	3.50	
Steele	do	T.						.20			.04													1.03	.23	.96	T.					.64	3.10	
Towner	Mouse	.14						.75	.27															.65	1.67	.30							3.78	
Turtle Lake	Missouri	T.			T.		T.	.37	.25										T.						.09	2.08	.40					.38	3.57	
Tuttle	do	.01			T.		.02	.62	.05		.08													.92	.48	.63							12	2.93
Underwood	do	T.			T.			.30																.30	.67	T.							1.89	
Velva	Mouse	T.						1.39	.20															.12	1.50	.15							.08	3.44
Washburn	Missouri				T.			.45			T.													T.	1.45	.23						.52		2.65
Westhope	Mouse	.07					T.	.60																1.31	.79	.04	.04						2.85	
Willow City	do	.04					T.	.40					.10		T.									.41	1.23	.31	.05						2.44	
Wishek 2	Missouri	.02	T.				T.	.45	.02			.10			T.									.01	.57	.23	.01							

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

2 Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

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UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVII BISMARCK, N. D., MAY 1948 No. 5

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

The month of May was warm and dry. There were the usual extremes of temperature. The 18th and 19th were exceptionally warm with many stations breaking long time records for these dates. On the other hand at most stations the month was frost free or frost was light with no damage to growing crops. The fruit and plant growth was further advanced than last year at the end of May. After the rains of the 14th-15th, amounts were very light except for beneficial showers over the extreme southwest portion. By the close of the month topsoil was becoming too dry in most sections. Sunshine was 75% of possible or 15% above the normal. Fogs were observed on the 1st, 2d, 17th and 31st. Thunderstorms, mostly of a mild character, were reported on the 1st, 2d, 14th and 26th. During the first week of May the Sheyenne River did considerable flooding of farm lands from Lisbon to the mouth of the river. In Cass County 10,000 acres were flooded. Crops will grow on approximately two thirds of the land that was seeded before flooding. The spring wheat crop was up to a good stand and color with late planted crops, especially flax, thin and spotted because of poor topsoil moisture. Pastures and range grasses look good with prospects bright for a good hay crop.—M.S.C.

TEMPERATURE

The mean temperature for the state was 55.1°, or 1.7° above the 1892-1948 average for May. The mean temperature for the eastern division was 55.5°; for the middle division, 55.0°; and for the western division, 54.8°. The highest mean temperature was 57.8° at Linton and Wahpeton, and the lowest, 52.0° at Stanley, making a range in mean temperature of 5.8°. The absolute range was 79°, from 101° at Granville on the 19th, to 22° at Cavalier on the 9th. The average daily deficiency in temperature for the state since January 1, 1948, is 1.3°.

PRECIPITATION

The average precipitation for the state was 1.38 inches, or 0.88 inch less than the 1892-1948 average for May. In the eastern division the average amount was 1.14 inches; in the middle division, 1.19 inches; and in the western division, 1.82 inches. The greatest monthly amount reported was 3.73 inches at Dunn Center; the least was 0.06 inch at Ashley. The greatest amount recorded in any 24 consecutive hours was 2.50 inches at Hannah on the 15-16th. The accumulated deficiency in precipitation for the state since January 1, 1948, is 0.05 inch. The average snowfall was 0.1 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.31	12	29.56	14	13.4	45	nw.	15	71	77	44	44	75	301
Devils Lake...	30.32	12	29.56	14	9.4	31	ne.	20	76	76	44	45	80	342
Fargo.....	30.30	12	29.50	14	12.5	37	w.	15	70	77	40	41	68	300
Williston.....	30.33	10	29.55	19	8.9	34	nw.	15	78	78	61	53	78	313

† And other dates.

COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	46.6	96	13	3.43	1.84	1.33	2.20	3.9	12	6	8	17	
1893...	52.2	97	19	1.29	1.14	2.40	1.61	0.2	11	11	8	12	
1894...	54.6	98	23	1.40	1.24	1.88	1.51	0.0	5	16	9	6	
1895...	54.4	101	15	2.60	2.88	2.57	2.48	0.0	8	10	11	10	
1896...	56.9	103	22	5.44	3.70	5.81	4.95	0.0	13	6	14	11	
1897...	55.4	97	16	0.85	0.61	0.60	0.67	T.	4	16	10	5	
1898...	52.7	92	14	1.95	1.84	2.15	1.98	0.0	5	15	9	7	
1899...	50.6	91	16	3.40	4.80	2.27	3.49	0.4	8	9	9	13	
1900...	59.2	106	15	0.78	0.70	0.59	0.69	0.0	3	18	8	5	
1901...	60.0	99	19	0.35	0.24	0.33	0.31	T.	2	21	4	6	
1902...	55.9	94	24	4.31	3.33	3.06	3.57	0.4	10	13	6	12	
1903...	54.3	96	11	2.52	3.35	3.50	3.12	T.	4	14	8	9	
1904...	54.2	93	20	2.05	1.64	1.10	1.60	T.	6	14	9	8	
1905...	50.1	88	10	4.24	2.78	1.72	2.91	4.0	8	12	8	11	
1906...	50.8	99	11	4.41	4.74	5.59	4.91	0.4	12	9	8	14	
1907...	44.0	84	6	1.52	1.02	1.39	1.31	3.1	6	12	10	9	
1908...	50.8	88	9	3.54	2.58	2.57	2.90	0.9	8	13	7	11	
1909...	51.0	98	5	4.78	3.92	4.68	4.46	0.1	10	12	9	10	
1910...	50.7	94	10	0.86	0.95	1.28	1.03	0.1	6	12	11	8	
1911...	55.0	99	6	4.06	2.25	2.39	2.90	T.	8	14	9	8	
1912...	54.2	90	16	4.17	4.59	4.42	4.39	0.7	11	10	10	11	
1913...	51.2	100	11	1.75	1.63	1.74	1.71	0.2	9	10	10	11	
1914...	55.2	95	16	1.83	2.56	1.98	2.12	1.0	8	16	8	7	
1915...	51.1	98	15	3.37	3.21	2.81	3.13	0.4	9	10	10	11	
1916...	51.0	95	7	2.95	1.70	1.64	2.10	0.3	8	11	11	9	
1917...	51.2	98	15	0.21	0.29	0.53	0.34	0.1	2	20	7	4	
1918...	51.7	99	6	2.58	2.40	1.83	2.27	0.5	9	10	11	10	
1919...	55.5	101	16	4.29	3.14	1.91	3.11	0.4	9	16	8	7	
1920...	53.9	89	20	2.40	1.34	1.54	1.76	0.1	7	13	10	8	
1921...	53.8	90	21	2.75	2.22	2.36	2.44	T.	9	13	10	8	
1922...	56.3	93	24	4.29	2.81	3.08	3.39	0.1	12	10	11	10	
1923...	54.1	100	13	2.56	1.57	1.17	1.77	0.2	6	15	10	6	
1924...	46.9	84	15	1.05	0.57	0.81	0.81	0.0	5	12	10	9	
1925...	58.6	111	10	1.94	1.17	1.22	1.44	T.	4	17	9	5	
1926...	58.5	105	10	2.07	2.09	2.45	2.20	0.0	7	13	11	7	
1927...	48.0	87	13	5.21	6.06	5.77	5.68	3.2	14	6	8	17	
1928...	58.2	107	16	1.02	1.23	1.00	1.08	0.0	5	18	7	6	
1929...	49.1	92	8	2.00	2.69	4.28	2.99	0.4	7	16	9	6	
1930...	50.8	98	18	3.76	2.40	1.69	2.62	0.7	9	12	8	11	
1931...	53.1	100	10	2.17	1.09	0.98	1.41	0.3	6	16	7	8	
1932...	55.9	98	25	2.66	2.02	1.76	2.15	2.2	6	13	9	9	
1933...	51.8	98	19	2.78	3.18	3.50	3.15	T.	9	9	10	12	
1934...	63.6	111	18	0.46	0.32	0.29	0.36	0.0	3	17	10	4	
1935...	49.5	89	20	2.11	2.93	2.79	2.61	1.5	12	6	11	14	
1936...	61.0	100	20	1.05	0.66	0.70	0.80	T.	4	19	9	3	
1937...	56.9	99	19	2.35	1.67	1.27	1.76	T.	7	12	11	8	
1938...	52.0	88	18	2.93	2.07	2.66	2.55	0.2	11	8	12	11	
1939...	60.1	104	18	1.33	1.60	1.71	1.55	0	8	13	11	7	
1940...	54.9	96	17	1.60	2.26	2.06	1.97	0.1	8	14	11	6	
1941...	58.3	93	21	2.23	3.12	3.48	2.94	T.	12	10	10	11	
1942...	50.0	87	19	3.87	2.94	2.27	3.03	0.5	11	9	9	13	
1943...	49.9	96	15	2.72	2.25	1.66	2.21	1.0	9	8	10	13	
1944...	58.2	95	11	3.33	2.64	2.22	2.73	0.1	11	11	12	8	
1945...	47.7	84	10	1.60	1.42	1.61	1.54	0.5	8	10	11	10	
1946...	50.6	88	10	1.61	1.38	1.82	1.60	0.6	9	9	11	11	
1947...	49.9	87	13	1.23	1.04	1.05	1.11	T.	7	10	14	7	
1948...	55.1	101	22	1.14	1.19	1.82	1.38	0.1	6	14	10	7	
Period	53.4	111	5	2.47	2.16	2.16	2.26	0.5	8	12	10	9	

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Climatological Data for May 1948

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observer	
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With 0.1 in. or more precip.	Clear	Pt. cloudy			Cloudy
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	5	54.9	.....	97	19	25	7†	0.75	.....	0.31	14	0.5	7	23	2	6	nw.	Albert Thoren.
Carrington	Foster	1,579	51	58.5	+0.4	94	19	29	10	0.47	-2.02	0.35	14	0	4	21	4	6	.....	Soo Line Agent.
Casselton	Cass	934	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ashton Lockhart
Cavalier	Pembina	894	41	54.6	+1.0	96	19	22	9	1.70	-0.56	1.16	14	T	6	15	10	6	se.	City Light & Power Co.
Colgate	Steele	1,180	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. M. Jensen.
Cooperstown	Griggs	1,428	52	55.0	+1.2	94	19†	29	9	1.13	-1.40	1.02	14	0	2	12	13	6	ne.	R. J. Lockner
Courtenay	Stutsman	1,523	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	73	54.6	+2.0	94	19	30	9	1.37	-0.66	1.13	14	0	6	10	11	10	ne.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	48	56.2	+1.8	95	19	28	6	0.75	-1.81	0.41	14	0	4	17	13	1	nw.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	25	54.4	+1.2	91	19	30	9	1.53	-0.33	1.01	14	T	6	24	4	3	n.	Mike Davis.
Ellendale	Dickey	1,457	50	55.6	+0.3	89	18	31	6	0.48	-2.13	0.25	1	0	4	18	8	5	ne.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	68	56.0	+0.9	92	19	30	6	1.05	-1.84	0.62	14-15	0	7	8	14	9	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	57	57.2	+1.5	93	19	31	6	1.05	-1.90	0.85	14	0	4	19	8	4	ne.	Art Waterman.
Fullerton	Dickey	1,439	51	57.2	+2.4	94	19	31	6†	1.33	-1.66	0.76	2	0	4	14	13	4	ne.	F. O. Alin.
Gackle	Logan	1,951	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tony Martin.
Grafton	Walsh	827	57	56.6	+2.5	95	19	30	7†	0.41	-1.61	0.17	27	T	4	19	10	2	ne.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	58	55.4	+1.2	95	19	30	6†	0.79	-1.71	0.25	6	0.5	7	19	6	6	sw.	University of N. Dak.
Grand Forks Apt., 2 1/2 mi. W	Grand Forks	834	8	54.8	.....	96	19	28	6	0.72	.....	0.28	14-15	0.6	7	10	11	10	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	20	56.8	.....	90	19	30	7	0.33	-2.53	0.30	3	0	2	18	8	5	.....	Soo Line Agent.
Hannah	Cavalier	1,568	55	52.6	+1.0	91	19	28	28	3.66	+1.55	2.50	15-16	0	6	10	18	3	nw.	A. E. Prior.
Hillsboro	Traill	901	43	56.1	+1.3	94	19	31	7†	0.99	-1.96	0.63	14	0	6	13	16	2	ne.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	57	56.6	+2.5	95	19	33	6†	0.72	-2.05	0.51	2	0	3	7	20	4	ne.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE.	Stutsman	1,494	8	54.7	.....	95	19	30	28	0.48	.....	0.28	2	0	4	4	17	10	ne.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	8	52.2	.....	91	19	29	10	0.51	.....	0.25	14	0	5	9	10	12	ne.	U. S. Wildlife Refuge.
LaMoure	LaMoure	.....	2	57.3	.....	93	19	28	6	0.61	.....	0.25	2	0	3	18	11	2	se.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	53	54.9	+3.1	90	19	27	9†	3.40	+1.41	1.35	15	3.0	7	16	9	6	ne.	V. Sturlaugson.
Larimore	Grand Forks	1,134	56	54.8	+1.4	95	19	27	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jesse P. Phillips.
Lisbon	Ransom	1,091	45	55.9	+1.1	94	19	29	28	0.54	-2.23	0.40	13	0	4	24	3	4	nw.	Robert M. Jodsaas.
Mayville	Traill	975	53	57.0	+1.6	94	19	30	8†	0.67	-2.05	0.31	2	0	6	13	11	7	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	26	53.6	+0.9	93	19	27	10	0.92	-1.39	0.69	14	0	6	12	12	7	se.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	37	57.4	+1.6	94	19	28	6	0.82	-2.19	0.38	2-3	0	7	20	6	5	n.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	1	54.6	.....	91	19	29	9	1.38	.....	1.21	14-15	1.0	7	15	10	6	ne.	Harold Feldner
Oakes	Dickey	1,318	20	58.2	+2.6	93	19	33	6	1.21	-1.50	0.60	14	0	4	21	5	5	s.	C. M. Hagen.
Park River	Walsh	998	45	55.7	+2.1	95	19	28	7†	1.63	-0.31	0.69	14-15	3.0	5	25	3	3	ne.	Martin Severson.
Pembina Airport, 1 mile S.	Pembina	795	75	54.5	+1.3	94	19	31	7†	1.56	-0.63	0.91	14	0	6	11	13	7	n.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	18	54.0	.....	91	19	28	9	2.33	-0.11	1.37	2	0	4	16	12	3	n.	T. C. Overland.
Sharon	Steele	1,516	25	55.1	+1.0	92	19	27	9	2.07	-0.67	1.05	14	0	5	24	4	3	ne.	Hugh Lyon.
Valley City	Barnes	1,229	44	57.0	+2.4	94	19	31	6	0.94	-1.84	0.50	14	0	5	18	10	3	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	57	57.8	+1.5	90	19†	27	6	0.95	-1.75	0.42	2	0	6	17	12	2	ne.	State School of Science.
Average for Eastern Division				55.5	+1.2	97	19	22	9	1.14	-1.33	0.50	15-16	0.2	5	16	10	5	ne.	
Middle Division																				
Ashley	McIntosh	2,025	53	54.4	+0.2	94	19	29	5	0.06	-2.34	0.06	8	0	1	14	8	9	se.	Raymond R. Spitzer
Belcourt	Rolette	1,960	4	51.0	.....	90	19	27	8†	1.46	.....	0.57	14	0	8	17	9	5	ne.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	46	54.6	+1.9	92	19	27	9	0.85	-1.30	0.35	14	0	4	24	2	5	nw.	Robert L. Peterson.
Bismarek	Burleigh	1,670	74	57.6	+2.8	95	19	34	10	1.11	-1.12	0.47	1	0	6	5	12	14	e.	U. S. Weather Bureau.
Bismarek Airport, 2 1/2 mi. SE.	Burleigh	1,650	9	56.5	+3.5	96	19	33	4	0.78	-1.54	0.46	2	0	6	5	12	14	e.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	57	55.5	+3.2	93	20	30	4	1.54	-1.51	0.66	14-15	0	7	9	18	4	ne.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. O. Anderson.
Carson, 2 1/2 miles SW	Grant	2,500	37	56.2	+1.7	93	19	33	3†	1.64	-0.76	0.71	5	0	8	.....	.....	.....	.....	J. W. Evans.
Center	Oliver	2,100	11	55.0	+0.5	94	19	24	12	1.22	-1.05	0.63	2	0	5	12	14	5	se.	Fred L. Heinz.
Drake	McHenry	1,634	19	56.0	+1.3	93	19	28	10	1.02	-1.06	0.39	1	0	5	21	7	3	n.	Geo. A. Pauls.
Dunseith, 2 miles NNE	Rolette	1,682	53	53.8	+1.0	91	20	29	9†	2.18	+0.31	0.77	2	T	8	25	3	3	e.	State Tuberculosis San.
Eckman	Bottineau	1,500	43	54.0	+1.4	95	19	29	9†	1.25	-0.73	0.89	2-3	0	6	12	14	5	e.	E. R. Sherman.
Fessenden	Wells	1,810	37	55.0	+1.7	92	19	30	10	1.33	-0.95	0.53	14	0	6	15	13	3	sw.	John V. Zuber.
Fort Yates	Sioux	1,670	49	57.0	+0.3	95	19	31	6	1.16	-1.00	0.50	2	0	3	12	12	7	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE.	Ward	1,609	28	55.6	+1.4	93	19	28	4	1.83	-0.20	0.66	2	0	9	20	6	5	s.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	72	55.2	+1.6	97	19	30	9	0.81	-1.52	0.46	2	0	5	10	6	12	e.	Mac H. Vorachek.
Granville	McHenry	1,804	42	54.5	+1.6	101	19	25	10	1.61	-0.42	0.81	2	0	6	25	2	4	ne.	Fred Roble.
Hansboro	Towner	1,597	41	52.8	+1.3	92	19	26	9†	0.98	-1.12	0.43	14	1.0	7	10	16	5	e.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. J. Reynolds.
Leeds	Benson	1,515	8	54.0	.....	95	19	29	10	0.97	.....	0.47	14	0	5	16	9	6	ne.	John Fagen.
Linton	Emmons	1,711	32	57.8	+2.1	96	19	28	6	1.08	-1.21	0.37	2	0	7	11	13	7	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	34	55.3	+1.5	95	19	30	9†	1.19	-0.86	0.70	14	0	7	9	17	5	se.	Benson Cy. A. & T. Sch.
Mandan, 1 1/2 miles SW	Morton	1,750	35	56.2																

Climatological Data for May 1948—Continued																								
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days					Prevailing direction of wind	Observer			
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy						
Western Division—Con.																								
Dickinson Airpt., 5½ mi. S.	Stark	2,587	8	53.6	.....	94	19	29	10	2.13	.....	0.81	1-2	0	10	5	12	14	se.	U. S. Airway Comm. Sta.		
Dunn Center	Dunn	2,191	50	55.0	+2.2	98	19	27	12	3.73	+1.39	1.29	1	0	7	17	6	8	se.	O. T. Evenson.				
Elbowoods	McLean	2,082	56	56.2	+1.6	97	19	23	12	0.79	-1.40	0.32	5	0	6	15	13	3	nw.	H. W. Case.				
Epping	Williams	2,224	40	56.2	+1.2	95	18	29	9†	1.17	-0.97	0.44	2	0	6	13	12	6	se.	T. Beachler.				
Fairfield, 9½ miles N.	Billings	2,650	20	.....	.....	.....	.....	.....	.....	2.21	-0.15	1.22	8-9	0	5	12	9	10	se.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	8	54.2	+1.2	94	18†	29	4	1.52	-0.74	0.31	20	0	11	4	17	10	se.	Chester K. Puda.				
Grenora	Williams	2,114	40	55.4	+3.2	95	18	28	10	1.19	-1.03	0.88	8	0	2	23	5	3	se.	L. D. Nielson.				
Halliday	Dunn	2,073	7	.....	.....	.....	.....	.....	.....	1.47	.....	0.68	2	0	6	13	14	4	se.	John Kisse.
Hettinger	Adams	2,675	42	54.7	+0.2	92	19	28	11†	1.97	-0.31	0.96	1-2	0	9	14	9	8	se.	Edgar Martin.				
Kenmare	Ward	1,799	17	55.7	+1.8	94	19	28	10	2.26	+0.28	1.47	2-3	0	6	11	12	8	se.	Theo. E. Eckberg.				
Marmarth	Slope	2,714	40	56.5	+2.9	93	18†	27	11	3.02	+0.73	1.03	23	0.3	9	11	5	15	se.	S. P. Grane.				
Medora, 1½ mi. W.	Billings	2,271	34	55.8	+2.1	95	19	28	4†	1.81	-0.37	0.65	2	0	4	16	6	9	se.	Harry Roberts.				
Mott	Hettinger	2,424	42	55.4	+0.8	94	19	29	4	1.78	-0.48	0.62	1-2	0	7	10	13	8	se.	Northern Pacific Agent.				
New England	Hettinger	2,621	57	54.4	+1.2	99	19	28	12	2.42	+0.25	0.59	9-10	T.	10	9	9	13	se.	Alfred Hasel.				
Parshall	Mountrail	1,929	34	54.6	+0.6	94	19	23	10	1.35	-0.82	0.38	1†	0	7	12	17	2	se.	C. E. Shubert.				
Portal	Burke	1,954	35	54.2	+2.1	90	19†	26	10	2.61	+0.54	1.52	2-3	0	7	12	10	9	se.	U. S. Customs Service.				
Powers Lake	Burke	2,205	44	54.2	+0.7	92	19	26	10	1.87	-0.28	0.63	2-3	0	4	12	13	6	se.	E. J. Lewis.				
Richardton, 1½ miles N.	Stark	2,467	33	56.1	+2.2	96	19	29	10	1.87	-0.59	0.64	1-2	0	12	12	11	8	se.	Assumption Abbey.				
Ryder	Ward	2,108	20	.....	.....	.....	.....	.....	.....	0.87	-1.22	0.55	2-3	0	3	12	10	9	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	23	53.5	-1.7	95	19	26	12	1.87	-0.08	0.80	1	0	8	16	11	4	e.	H. J. Bugge.				
Stanley	Mountrail	2,258	11	52.0	.....	92	19	25	11	1.19	-1.00	0.32	3	0	5	11	11	9	ne.	Leroy Edwards.			
Tagus	Mountrail	2,179	20	.....	.....	.....	.....	.....	.....	1.94	-0.05	0.66	2	0	8	14	13	4	e.	Geo. N. Pilgard.
Tioga	Williams	2,279	20	.....	.....	.....	.....	.....	.....	1.10	-0.96	0.85	2	0	2	20	2	9	ne.	L. A. Simon.
Trotters	Golden Valley	.....	23	.....	.....	.....	.....	.....	.....	1.58	-0.65	0.88	2	0	5	6	18	7	se.	Walter Grunewald.
Van Hook	Mountrail	1,864	8	54.6	.....	95	19	29	9†	2.09	.....	1.14	26	0	7	13	12	6	nw.	H. Glenn Sims.		
Watford City	McKenzie	2,084	36	56.2	+1.7	94	18	28	10	1.71	-0.28	0.57	2	0	10	14	15	2	.....	J. C. Zeller.			
Wildrose	Williams	2,258	19	.....	.....	.....	.....	.....	.....	1.28	-0.62	0.46	2	0	6	14	14	3	se.	Jonathan Winkjer.
Williston	Williams	1,878	70	56.0	+2.0	94	18	30	10	1.35	-0.71	0.48	4	0	8	6	14	11	se.	U. S. Weather Bureau.				
Average for Western Division				54.8	+1.1	99	19	23	10	1.82	-0.34	1.52	2-3	0.1	7	12	11	8	se.					
Average for the State				55.1	+1.7	101	19	22	9	1.38	-0.88	2.50	15-16	0.1	6	14	10	7	se.					

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.
T. Trace, precipitation 0.005 inch or less.
† And other dates.
‡ Best available used for stations not equipped with recorders.

Daily Temperatures for May 1948																																						
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean						
Ashley	Maximum... 60	60	64	68	57	66	63	54	56	48	64	65	70	71	66	68	75	86	94	62	79	80	81	70	78	85	62	64	64	67	71	68.3						
	Minimum... 45	39	32	36	29	37	40	35	36	37	30	34	39	40	48	34	33	61	59	42	50	39	36	51	44	34	34	32	42	53	40.4							
Bismarck Airport	Maximum... 58	56	63	63	58	68	64	54	54	53	63	68	74	72	66	72	80	93	96	76	82	86	73	71	78	87	64	66	66	71	75	70.0						
	Minimum... 42	44	39	33	40	34	38	42	36	33	39	35	37	47	44	48	40	59	69	52	39	53	49	40	39	51	44	35	36	50	45	43.0						
Bottineau	Maximum... 60	60	53	58	59	58	52	52	52	58	64	67	70	70	56	69	71	85	92	93	80	82	81	69	80	85	76	66	70	74	76	69.0						
	Minimum... 42	42	41	30	37	37	35	35	34	33	35	38	39	50	40	45	45	52	65	57	45	52	46	42	40	46	37	36	41	41	43	42.0						
Carson	Maximum... 58	54	65	65	61	67	65	55	48	50	63	67	71	71	65	72	80	92	93	78	81	83	78	74	80	88	65	64	60	65	74	69.4						
	Minimum... 35	44	33	35	41	38	39	38	34	37	37	34	39	48	44	42	44	56	65	59	42	53	51	42	45	52	41	36	43	45	47	43.1						
Crosby	Maximum... 55	47	58	57	60	60	57	47	47	50	57	62	69	74	63	58	71	79	91	95	72	81	83	67	71	81	86	62	70	73	80	67.9						
	Minimum... 37	38	38	32	37	38	38	34	27	25	30	32	40	49	41	39	45	52	56	52	43	51	45	36	42	49	34	34	35	35	42	39.5						
Devils Lake	Maximum... 59	59	52	55	56	45	51	53	51	57	63	67	72	64	60	64	71	81	94	74	78	82	65	68	80	84	56	65	68	75	79	66.1						
	Minimum... 44	46	42	38	38	37	33	33	30	31	35	42	42	45	46	46	49	52	65	56	46	55	45	42	47	46	42	37	42	44	50	43.2						
Dickinson Airport	Maximum... 52	48	59	62	58	65	65	47	47	45	60	66	70	58	63	69	73	90	94	73	79	84	72	72	77	83	59	62	48	57	71	65.5						
	Minimum... 31	31	37	33	38	33	41	37	34	29	38	35	40	43	42	38	45	55	64	50	46	53	50	42	41	51	40	35	43	45	51	41.8						
Dunn Center	Maximum... 55	47	60	63	57	68	64	45	52	59	66	71	77	70	71	75	83	95	98	75	82	87	76	75	82	88	64	69	64	81	77	70.6						
	Minimum... 32	35	40	30	42	32	39	37	33	29	31	27	36	44	40	36	42	52	57	57	40	45	49	38	35	49	42	32	33	42	38	39.2						
Fargo Airport	Maximum... 58	65	57	62	58	51	59	60	58	62	65	72	72	74	64	65	73	80	92	77	82	85	67	69	82	87	63	65	69	78	80	69.4						
	Minimum... 46	47	43	38	39	30	32	35	32	36	38	44	41	48	44	48	41	51	62	51	48	50	46	40	39	49	42	32	38	41	48	42.5						
Fesseuden	Maximum... 56	67	52	62	57	58	53	51	52	55	63	68	72	68	61	65	76	85	92	90	75	81	65	67	78	83	66	67	66	73	78	67.4						
	Minimum... 41	49	40	35	48	32	33	31	30	32	35	40	49	43	44	40	46	60	57	43	52	47	39	46	51	43	36	40	40	48	42.5							
Fullerton	Maximum... 66	66	61	67	61	70	62	61	60	58	67	69	73	77	66	69	77	87	94	82	81	87	76	75	83	88	70	68	70	77	76	72.4						
	Minimum... 44	43	40	37	41	31	34	40	36	40	45	33	36	50	43	48	39	49	63	60	42	48	46	37	41	47	45	31	34	39	41	41.9						
Garrison	Maximum... 57	58	57	61	60	67	60	50	55	57	65	68	71	59	63	73	77	90	97	74	80	84	70	73	80	84	63	69	70	73	77	69.1						
	Minimum... 40	43	39	33	41	35	37	35	30	31	36	33	37	45	44	45	40	56	69	53	41	48	48	40	39	49	42	32	36	39	44	41.3						
Golva	Maximum... 56	49	60	61	55	68	59	58	44	42	55	64	58	60	62	72	83	94	94	76	81	84	76	77	79	85	60	60	50	59	52	66.2						
	Minimum... 39	39	36	29	38	40	45	44	40	39	39	40	37	35	45	37	43	53	54	56	45	45	51	42	40	48	41	35	42	43	47	42.2						
Grafton	Maximum... 61	65	58	55	59	53	53	54	56	61	66	71	74	72	65	66	74	78	95	92	81	84	78	69	83	85	77	66	72	78	80	70.4						
	Minimum... 43	46	41	45	39	33	30	32	30	32	35	40	43	46	44	47	42	50	59	58	46	51	42	41	42	56	43	35	38	44	54	42.8						
Grand Forks Airport	Maximum... 57	64	54	58	56	49	55	56	56	62	66	71	74	73	64	65	74	80	96	76	81	85	67	68	82	89	58	65	72	80	80	68.7						
	Minimum... 42	46	44	41	35	28	30	31	31	32	32	37	41	47	44	45	41	50	64	49	41	49	43	38	39	49	38	32	36	43	49	40.9						
Jamestown Airport	Maximum... 57	64	55	64	59	63	57	58	55	58	65	69	72	71	64	65	75	87	95	75	81	85	70	71	79	87	68	67	69	74	77	69.4						
	Minimum... 42	44	39	34	37	31	32	34	32	32	38	35	47	46	44	36	53	64	48	40	45	45	38	39	48	40	30	34	41	39	40.0							
Kenmare	Maximum... 59	47	57	56	60	65	54	50	52	58	63	68	72	69	57	72	77	87	94	73	79	83	68	72	85	87	65	70	70	74	78	68.1						
	Minimum... 40	41	39	34	39	43	36	34	29	28	35	35	45	55	43	46	48	53	63	56	46	50	47	42	50	56	37	41	43	40	49	43.3						
Langdon	Maximum... 65	63	57	58	62	55	53	52	57	62	68	73	78	70	57	70	73	77	90	85	81	86	75	72	84	87	70	75	72	78	78	70.3						
	Minimum... 40	40	41	42	30	31	29	30	27	27	29	35	42	45	46	42	42	47	60	55	43	49	38	35	43	46	37	32	40	39	47	39.5						
Marmarth	Maximum... 60	56	64	60	62	69	69	61	45	43	58	65	72	68	66	73	82	93	93	90	79	86	80	72	78	84	72	58	52	58	77	69.2						
	Minimum... 40	40	35	30	38	29	35	40	32	35	27	29	44	45	45	38	50	57	65	60	50	55	55	60	40	52	46	45	43	44	54	43.8						
Minot Airport	Maximum... 58	54	55	57	57	61	54	52	53	57	64	68	71	60	59	71	76	89	98	75	78	84	68	71	80	82	59	66	68	73	76	67.5						
	Minimum... 41	43	40	33	40	41	35	35	27	28	35	34	46	47	47	46	50	53	69	57	43	50	46	41	46	43	39	40	41	40	49	42.7						
Mott	Maximum... 52	52	61	66	56	68	67	62	45	45	62	64	71	68	66	69	79	91	94	89	80	84	80	72	79	84	68	62	58	60	70	68.5						
	Minimum... 32	38	39	29	40	31	40	38	34	32	36	30	39	45	40	44	56	64	56	50	51	52	46	37	50	46	41	43	41	50	42.3							
Pembina Airport	Maximum... 60	63	52	53	50	48	52	54	52	59	66	72	74	73	59	64	73	79	94	75	81	79	65	67	82	85	54	64	70	78	80	67.0						
	Minimum... 42	45	45	43	36	35	31	31	31	32	32	35	41	47	45	45	46	50	62	52	48	52	43	38	40	45	38	35	40	46	51	42.0						
Sharon	Maximum... 57	63	58	62	58	50	54	54	54	60	63	68	70	70	60	65	70	78	92	80	80	85	73	68	79	85	74	67	70	75	77	68.3						
	Minimum... 42	44	39	34	37	33	30	29	27	30	34	42	42	45	44	46	42	59	55	47	52	43	40	45	57	52	35	45	45	47	41.9							
Steele	Maximum... 62	62	59	64	58	69	60	55	53	55	63	67	72	72	64	68	76	88	95	86	77	82	70	69	76	85	70	95	68	72	74	69.5						
	Minimum... 49	41	40	32	39	30	32	37	32	30	34	30	34	50	36	34	36	67	65	55	40	49	47	37	48	40	31	34	40	40	40	40.2						
Valley City	Maximum... 59	66	63	63	62	60	58	59	59	60	65	68	73	70	71	64	74	82	94	90	79	84	80	69	80	86	62	65	69	75	78	71.2						
	Minimum... 44	47	42	36	41	31	34	34	36	40	45	38	47	45	48	39	50	64	63	46	44	47	44	37	49	44	33	35	44	44	42.7							
Wahpeton	Maximum... 60	67	62	67	65	61	60	59	61	60	64	70	74	70	74	70	66	74	80	90	81	86	85	72	80	85	79	66	69	75	78	71.8						

Daily Precipitation for May 1948

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James Red.	.02	T.	T.											T.	.35		.05										.05					0.47
Casselton	Sheyenne	T.	.11	T.											1.02	T.												T.					1.13
Cooperstown	James	.15	.16												.14	.10						T.						T.					0.65
Courtenay	Devils Lake	T.	.04	.06					.03						1.13	.03	T.											.08					1.37
Devils Lake ¹	James	.15	T.			T.		T.	.18						.41	T.						.01											0.75
Edgeley	Devils Lake	T.	.15	.02				.10							1.01	.20	.05											T.					1.53
Edmore	James	.25	.03						.12						.08							.01											0.48
Ellendale	Devils Lake	.02	.30	.03				T.							.55	.08	.04					T.						.03	T.				1.05
Fargo ¹	James	.14	.02						T.	.04					.85																		1.05
Forman	Sheyenne	.20	.76	T.					.16						.21																		1.33
Fullerton	James																																
Gackle	do																																
Grafton	Red.			.08	T.			T.							T.	T.		.05										.11	.17				0.41
Grand Forks Airport ³	do	T.	.11	.04				.20							.23	.11	.02											.01	T.				0.7
Hankinson ²	do	.03		.30																													0.33
Hannah	Pembina		.22	.05				.54							T.	2.10	.40												.35	T.			3.66
Hillsboro	Red.	.01	.15					T.							.63	.08	.03												.09				0.99
Jamestown Airport ³	James	.05	.28					T.							.07	.08	T.											T.					0.48
Langdon	Pembina		.22	.15	.05			.33							1.25	1.35	.05																3.40
Larimore	Red.																																
Lisbon	Sheyenne		.06						.07						.40	.01																	0.54
Mayville	Red.	T.	.31	T.				T.							.06	.21	.05											.02	.02				0.67
McHenry	James	T.	.15												.69	.03	.03					.01						.01	T.				0.92
McLeod	Sheyenne	.06	.24	.14					.03						.20		.09					.06											0.82
Oakes ²	James	.43		.07		T.				.11						.60																	1.21
Park River	Red.		.31	T.	.05			.33								.69																	1.63
Pembina Airport ³	do	T.	.09	.03	.02										.91	.26												.25	T.				1.56
Petersburg	do		1.37	.03				T.							.87		.06											.25	T.				2.33
Sharon	do			.85											1.05	.05	.10																2.07
Valley City	Sheyenne	.11	.31					.02							.30	.20	.10						.02						T.				0.94
Wahpeton	Red.	.06	.42	.11						T.						.28	.06																0.95
Middle Division																																	
Ashley ³	Missouri								.06							.35	.15											.27					0.66
Bisbee	Devils Lake			.08												.15																	0.85
Bismarck Airport ¹	Missouri	T.	.46	.01	T.	.15			.06		T.				.06	T.	T.											.04		T.	T.		0.78
Bottineau ²	Mouse		.34	.10	T.	T.	.07								.34	.32	.31												.06				1.54
Butte	do	.28	.70	.04											.09	.07																	1.18
Carson	Heart	.02	.24			.71			.12		T.				.16								T.					.09		.29	.01	T.	1.64
Center	Missouri		.63		.22	.22			.10	T.					T.													.05					1.22
Drake ²	Mouse	.39	.18	.15												.22	.08																2.18
Dunseith	do		.77	.11	T.	T.	.09	T.							.65	.22	.13	T.										.14	.07	T.			1.02
Eckman	do	.06		.89	.02										.18	.07													.03				1.25
Fessenden	James	.15	.36	.06											.53	.09																	1.33
Fort Yates	Missouri		.50			.40					T.											.14											1.16
Foxholm	Mouse	.37	.66	.28		.02									.10	.02	.05																1.83
Garrison ³	Missouri	.06	.46	.06											.11							.12						.25	.08		.26		1.61
Granville	Mouse	.15	.67	.04											.29	.01													.31				0.81
Hansboro	Devils Lake		.07	.13	T.		.12							.43	.17	.01												.05					1.61
Linton	Missouri	.03	.37			.20			.33	.03	T.				.70	.08	.06														.09	.03	0.99
Lubbock	Sheyenne	.03	.23	.03		T.										.08	.06											T.	.06				1.08
Maddock	Missouri	.03	.48	.02		.20			.01	.02		T.			.07	.07													T.		T.		1.19
Mandan ²	do	.78	.51	.56											.16	.16						.06											1.23
Max ²	do	.56	.68	.09											.07	.06						.08											2.07
McClusky	Mouse	.04	.60	.24		T.									.15	.04	T.											.16					1.55
Minot Airport ³	do	.14	.77	.15		.01									.17	.09	T.																1.28
Mohall	Missouri	.04	.19	T.	.14				T.	.05						.09	T.												T.				1.89
Napoleon	Heart	T.	.25	.02		.18			.11	T.					.03	T.													.01				0.42
New Salem	James	.18	.06												.08	.03													.18			.02	0.62
Pettibone	Devils Lake	T.	.05	.09				.05							.57	.17													.11				0.53
Rolla	Mouse	.43	.02			.02									.40	.05													.11				1.04
Rugby	Missouri	.70				.78		.15	T.							.05																	1.03
Selfridge	do	.15	.39	.02	.01										.08	.03	.03												T.	.09	T.		1.72
Steele	Mouse		.56	.04				T.							.35	.10													T.	.06			0.73
Towner	Missouri	.28	.40	.05											.05	T.						.06							T.				1.11
Turtle Lake	do	.25	.40	T.												T.	.06												.01				0.84
Tuttle	do	.16	.67	.13					T.						.14							.12							T.				0.72
Underwood	do	.41	.79	.08											.18	.03													T.				1.22
Velva	Mouse	.35		.52	.15				T.						.11														T.	.02			1.54
Washburn	Missouri	.03	.13	.59		.04									.28	.13													T.				1.13
Westhope	Mouse		.30			.09									.46	.22	.06												.05				2.25
Willow City	do																											.06					1.19
Wishek ²	Missouri	.51	.01	.01				.03			T.				.12																		0.68
Western Division																																	
Alpha	Lit. Missouri	T.	.78	.04		.02		.18	.25						T.		T.																

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

¹ Midnight to midnight.

2 Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

^b Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 7-2-48-1200]

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U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

CLIMATOLOGICAL DATA

NORTH DAKOTA SECTION

F. J. BAVENDICK

VOL. LVII BISMARCK, N. D., JUNE 1948 No. 6

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR (NOT STAMPS)
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GENERAL SUMMARY

June was a pleasant month. The first nine days were warm but thereafter it was cool. Precipitation was moderate to heavy over the east and southwest, but generally below the June average over the balance of the state. The state average June, 1948 precipitation was 2.69 inches less than in June 1947. No severe storms were reported but hail storms were quite numerous. Hailstones averaging the size of doves' eggs fell to a depth of 6 to 8 inches in an area about a mile wide and seven or eight miles long about six miles west of Marmarth on the 14th. Crops were damaged but will recover somewhat. Sunshine was 2% below the seasonal average. The combination of beneficial showers and the prolonged cool weather was ideal for spring wheat and all small grain. It had a good stand and color by the close of the month. Some of the straw is short, but with favorable filling weather, a better than average crop is anticipated. Fogs were observed on the 1, 2, 6, 10, 11, 12, 14, 20, 21, 22, 23, 24, 25, 26, 27 and 28th. Thunderstorms were reported on the 1, 2, 3, 4, 9, 10, 24, 25, 27 and 28th.—M.S.C.

TEMPERATURE

The mean temperature for the state was 62.4°, or 0.4° below the 1892-1948 average for June. The mean temperature for the eastern division was 63.0°; for the middle division, 62.4°; and for the western division, 61.8°. The highest mean temperature was 65.4° at Forman and Wahpeton, and the lowest, 59.2° at Belcourt, making a range in mean temperature of 6.2°. The absolute range was 71°, from 101° at Oakes on the 20th, to 30° at Bowbells on the 18th. The average daily deficiency in temperature for the state since January 1, 1948, is 1.1°.

PRECIPITATION

The average precipitation for the state was 3.12 inches, or 0.40 inch less than the 1892-1948 average for June. In the eastern division the average amount was 3.76 inches; in the middle division, 2.82 inches; and in the western division, 2.77 inches. The greatest monthly amount reported was 7.64 inches at Grand Forks; the least was 0.77 inch at Powers Lake. The greatest amount recorded in any 24 consecutive hours was 3.45 inches at Dunn Center on the 3d. The accumulated deficiency in precipitation for the state since January 1, 1948, is 0.45 inch.

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Station	Sea-level pressure (extremes—inches)				Wind (true velocities)				Relative Humidity				Percentage of sunshine	Degree days
	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	12:30 a. m.	6:30 a. m.	12:30 p. m.	6:30 p. m.		
Bismarck.....	30.26	19	29.64	22	9.8	33	n.	9	82	86	57	58	56	96
Devils Lake...	30.27	16	29.57	23	7.7	26	nw.	7	84	51	52	61	112	
Fargo.....	30.22	11	29.38	23	10.7	36	nw.	7	82	86	55	56	53	92
Williston.....	30.30	18	29.59	30	6.7	25	n.	9	75	83	52	49	71	106

† And other dates.

COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation Averages						Number of days			
	Mean	Highest	Lowest	Eastern division	Middle division	Western division	State	Snowfall	Precipitation, .01 inch or more	Clear	Partly cloudy	Cloudy	
1892...	60.5	94	28	3.59	4.44	2.03	3.35	0	8	11	9	10	
1893...	67.4	103	33	3.25	4.28	2.60	3.38	0	9	13	10	7	
1894...	68.8	103	25	4.08	2.31	3.93	3.44	0	7	17	6	7	
1895...	59.7	97	29	5.37	4.54	4.11	4.67	0	12	8	13	9	
1896...	65.6	97	37	3.06	4.33	4.68	4.02	0	9	16	9	5	
1897...	61.7	109	20	4.40	4.40	2.45	3.75	0	9	11	10	9	
1898...	62.6	105	26	3.17	3.21	3.18	3.19	0	9	10	10	10	
1899...	62.2	105	30	3.20	4.25	3.98	3.81	0	10	12	11	7	
1900...	66.9	109	27	1.59	1.54	1.04	1.39	0	5	15	11	4	
1901...	61.6	95	22	7.20	5.31	5.90	6.14	0	15	10	11	9	
1902...	58.0	97	28	3.67	3.75	3.53	3.65	0	11	12	9	9	
1903...	62.4	96	27	1.02	1.52	1.78	1.44	0	4	17	8	5	
1904...	61.4	100	30	5.95	5.92	4.82	5.56	0	11	13	8	9	
1905...	59.7	97	32	4.49	4.64	3.87	4.33	0	12	10	7	13	
1906...	62.0	95	32	3.80	4.21	6.34	4.78	0	11	13	8	9	
1907...	61.9	95	25	3.47	2.53	2.80	2.93	0	10	12	10	8	
1908...	60.4	93	27	2.91	3.63	3.70	3.41	0	10	12	9	9	
1909...	62.9	98	28	3.94	2.49	3.92	3.45	0	10	12	11	7	
1910...	67.3	111	19	1.26	1.85	3.00	2.04	0	6	16	9	5	
1911...	66.9	108	25	3.13	3.42	2.61	3.05	0	9	13	10	7	
1912...	61.8	104	28	2.27	2.11	1.65	2.01	0	6	16	8	6	
1913...	65.8	101	27	2.85	1.98	2.52	2.45	0	8	16	9	5	
1914...	62.2	93	29	5.67	7.13	6.64	6.48	0	13	9	11	10	
1915...	56.7	94	20	5.59	5.11	3.73	4.81	0	12	9	12	9	
1916...	58.0	92	29	4.06	3.51	4.05	3.87	0	11	10	11	9	
1917...	59.7	103	19	2.38	1.88	1.96	2.07	0	8	13	11	6	
1918...	63.3	102	27	2.23	1.53	0.97	1.58	0	7	14	11	5	
1919...	67.2	108	22	3.15	1.99	1.50	2.21	0	5	15	10	5	
1920...	62.2	98	26	3.64	3.74	3.20	3.53	0	11	12	12	6	
1921...	68.2	108	30	3.28	2.83	4.74	3.62	0	9	14	10	6	
1922...	63.5	108	30	3.38	3.55	4.44	3.79	0	9	15	8	7	
1923...	66.1	100	30	4.79	2.83	4.21	3.94	0	8	13	12	5	
1924...	58.6	89	26	3.45	4.51	4.17	4.04	0	11	10	12	8	
1925...	61.5	98	30	7.72	5.43	4.84	6.00	0	14	11	10	9	
1926...	60.7	104	22	2.66	2.47	2.71	2.61	0	9	13	9	8	
1927...	61.2	99	22	3.81	2.34	2.30	2.82	0	9	11	13	6	
1928...	58.2	92	24	4.83	5.30	4.53	4.89	0	12	10	10	10	
1929...	61.4	98	21	1.10	1.10	2.12	1.44	0	7	16	9	5	
1930...	63.3	96	30	2.31	3.42	3.53	3.09	0	10	13	11	6	
1931...	68.4	110	27	2.93	2.05	2.07	2.35	0	8	14	10	6	
1932...	67.0	98	34	3.33	3.61	4.83	3.92	0	10	14	10	6	
1933...	70.7	110	33	1.99	1.66	1.67	1.77	0	7	18	10	2	
1934...	64.3	100	29	3.74	2.85	2.54	3.04	0	11	12	10	8	
1935...	60.3	99	25	3.65	2.70	2.77	3.04	T.	10	11	12	7	
1936...	66.4	110	28	1.41	1.40	1.20	1.34	0	6	16	10	4	
1937...	63.5	109	25	3.04	5.62	3.43	4.03	T.	7	15	9	6	
1938...	64.2	99	27	1.82	2.87	3.49	2.73	0	9	11	11	8	
1939...	60.1	99	29	5.44	4.67	3.67	4.59	0	12	10	11	9	
1940...	63.1	102	27	2.02	2.10	2.60	2.24	0	9	13	11	6	
1941...	64.2	97	32	5.86	4.91	5.85	5.54	0	12	12	9	9	
1942...	60.1	90	27	2.81	2.81	3.75	3.12	0	13	8	12	9	
1943...	60.4	102	28	4.61	5.07	5.54	5.07	1.3	13	8	11	11	
1944...	61.7	93	30	4.25	7.10	7.94	6.43	T.	13	10	9	11	
1945...	57.5	99	28	2.26	2.41	2.77	2.48	0	11	8	12	10	
1946...	63.2	100	26	3.65	2.86	2.66	3.06	0	10	10	14	6	
1947...	59.6	90	24	4.55	5.72	7.17	5.81	T.	14	7	12	11	
1948...	62.4	101	30	3.76	2.82	2.77	3.12	0	10	9	12	9	
Period	62.8	111	19	3.56	3.48	3.52	3.52	T.	10	12	10	8	

Climatological Data for June 1948

Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.					Precipitation, in inches					Number of days					Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Eastern Division																				
Arvilla, 1 1/2 mi. N.	Grand Forks	960	5	63.2	.....	97	2	37	17	4.09	.....	1.14	23	0	11	9	10	11	nw.	Albert Thoren.
Carrington	Foster	1,579	51	60.7	-2.7	92	17	37	127	2.32	-1.13	0.71	20	0	7	16	9	5	.....	Soo Line Agent.
Casselton	Cass	934	53																	Ashton Lockhart
Cavalier	Pembina	894	41	61.7	-0.9	96	2	36	17	5.17	+2.09	2.71	22-23	0	13	10	14	6	nw.	City Light & Power Co.
Colgate	Steele	1,180	15							3.12	-0.36	1.00	2	0	7	8	12	10	ne.	O. M. Jensen.
Cooperstown	Griggs	1,428	52	63.1	-0.1	95	2	41	151	4.29	+1.02	1.67	3	0	11	4	11	15	nw.	R. J. Lockner
Courtenay	Stutsman	1,523	18							2.46	-0.74	0.86	20-21	0	12	6	16	8	nw.	G. H. Hanawalt.
Devils Lake	Ramsey	1,471	73	62.6	+0.7	93	2	39	17	2.50	-1.06	0.99	25	0	9	4	16	10	nw.	U. S. Weather Bureau.
Edgeley, 2 miles S.	LaMoure	1,568	48	63.4	-0.2	94	24	40	12	3.92	+0.25	1.00	18	0	12	7	12	11	ne.	N. Dak. Agri. Exp. Sta.
Edmore, 1 1/2 miles W.	Ramsey	1,524	25	62.6	+0.3	92	2	37	17	2.18	-0.93	1.11	20-21	0	6	15	12	3	nw.	Mike Davis.
Ellendale	Dickey	1,457	50	62.5	-2.3	92	2	40	167	4.67	+1.26	1.63	25	0	11	12	7	11	ne.	J. E. Demmer.
Fargo Airport, 2 1/2 mi. NNW	Cass	895	68	63.8	-0.6	94	2	42	12	4.57	+0.52	1.87	3-4	0	12	5	9	16	n.	U. S. Weather Bureau.
Forman	Sargent	1,249	57	65.3	+0.3	93	2	40	12	4.00	+0.40	1.18	18	0	10	16	7	7	ne.	Art Waterman.
Fullerton	Dickey	1,439	51	63.6	-0.6	94	27	39	18	2.84	-1.07	0.81	20-21	0	10	8	15	7	ne.	F. O. Ahn.
Gackle	Logan	1,951	18																	Tony Martin.
Grafton	Walsh	827	57	64.0	+0.3	95	2	40	17	5.42	+2.17	2.92	23	0	9	11	14	5	nw.	Dr. J. C. Lamont.
Grand Forks, 2 miles W.	Grand Forks	830	58	62.8	-0.6	97	2	40	17	7.64	+4.36	2.23	2-3	0	12	7	14	9	nw.	University of N. Dak.
Grand Forks Appt., 2 1/2 mi. W	Grand Forks	834	8							6.40	.....	2.41	22-23	0	11	3	11	16	nw.	U. S. Airway Comm. Sta.
Hankinson	Richland	1,068	20	64.2		95	2	41	30	5.72	+2.14	2.13	23	0	7	10	8	12	nw.	Soo Line Agent.
Hannah	Cavalier	1,568	55	59.4	-1.1	88	2	35	17	4.04	+0.63	1.60	25-26	0	8	6	17	7	sw.	A. E. Prior.
Hillsboro	Trail	901	43	63.9	-0.8	95	2	42	15	3.61	+0.19	1.25	3-4	0	12	10	14	6	n.	Alfred Jahnke.
Jamestown, 2 miles SE	Stutsman	1,457	57	64.4	+0.7	95	2	42	19	2.62	-0.88	0.84	3-4	0	9	5	19	6	se.	N. Dak. State Hospital.
Jamestown Airport, 2 mi. NE	Stutsman	1,494	8	62.8	-0.9	93	2	41	12	3.02	-0.48	1.19	3-4	0	11	4	11	15	nw.	U. S. Airway Comm. Sta.
Kensal, 7 miles SW	Stutsman	1,440	8	60.2		90	17	38	13	1.61	.....	0.56	25	0	6	3	9	18	ne.	U. S. Wildlife Refuge.
LaMoure	LaMoure		2	64.1		92	2	41	127	4.18	.....	1.00	3-4	0	9	14	12	4	se.	Andrew Remick
Langdon, 1 1/2 mile SE	Cavalier	1,615	53	62.8	+2.2	92	2	35	17	2.65	-0.59	0.82	20-21	0	11	7	13	10	nw.	V. Sturlingson.
Larimore	Grand Forks	1,134	56	63.3	+0.4	95	2	40	17	3.76	+0.20	1.50	22-23	0	11	7	14	9	ne.	Jesse P. Phillips.
Lisbon	Ransom	1,091	45	63.6	-0.8	96	2	39	19	3.08	-0.82	0.86	3-4	0	9	15	2	13	nw.	Robert M. Jodsaas.
Mayville	Trail	975	53	64.3	-0.2	95	2	42	157	2.76	-0.61	0.96	3-4	0	14	4	19	7	n.	H. A. Ragaz.
McHenry, 6 miles NNE	Eddy	1,509	26	61.2	-0.6	93	2	35	157	2.29	-1.18	0.97	25-26	0	11	6	14	10	se.	C. E. Blasky.
McLeod, 3 miles E.	Richland	1,075	37	64.2	-1.1	93	27	38	12	3.81	-0.02	1.02	22	0	9	14	9	7	nw.	J. G. Carlson.
Munich, 3 1/2 miles SW	Cavalier	1,598	1	61.6		93	2	37	17	1.91	.....	0.85	25-26	0	6	4	15	11	nw.	Harold Feldner
Oakes	Dickey	1,318	20	64.0	-1.3	101	1	41	127	3.62	-0.02	0.84	17-18	0	12	17	4	9	e.	C. M. Hagen.
Park River	Walsh	998	45	64.2	+1.1	95	2	40	17	4.56	+1.30	2.10	22-23	0	8	12	13	5	nw.	Marvin Severson.
Pembina Airport, 1 mile S.	Pembina	795	75	61.9	-0.9	93	2	41	17	4.74	+1.55	1.75	22-23	0	13	6	9	15	nw.	U. S. Airway Comm. Sta.
Petersburg	Nelson	1,524	18	61.6		92	2	40	17	4.26	+0.76	1.20	23	0	11	12	12	6	w.	T. C. Overland.
Sharon	Steele	1,516	25	62.2	-0.8	91	2	39	18	2.89	-0.72	1.10	23-24	0	9	8	9	13	nw.	Hugh Lyon.
Valley City	Barnes	1,229	44	64.5	+0.4	92	2	42	13	3.26	-0.29	1.02	21-22	0	12	13	10	7	nw.	Miss I. C. Robertson.
Wahpeton	Richland	962	57	65.6	-0.2	92	2	43	12	4.98	+1.40	1.57	4	0	12	11	12	7	nw.	State School of Science.
Average for Eastern Division				63.0	-0.7	101	2	35	177	3.76	+0.20	2.22	23	0	10	9	12	5	nw.	
Middle Division																				
Ashley	McIntosh	2,025	53	62.0	-1.2	93	9	39	87	3.64	+0.22	1.15	20	0	9	12	5	13	.....	W. C. Drey.
Belcourt	Rolette	1,900	4	59.2		91	2	34	13	3.44	.....	1.23	2	0	8	8	16	6	nw.	Turtle Mt. Indian Agcy.
Bisbee	Towner	1,601	46	61.1	-1.0	94	2	36	171	2.40	-0.96	1.08	25	0	6	8	12	10	nw.	Robert L. Peterson.
Bismarck	Burleigh	1,670	74	63.9	-0.3	91	2	43	19	2.71	-0.52	0.82	11	0	9	5	10	15	e.	U. S. Weather Bureau.
Bismarck Airport, 2 1/2 mi. SE	Burleigh	1,650	9	63.6	+0.7	92	27	41	19	3.42	+0.07	1.48	24-25	0	10	5	10	15	e.	U. S. Weather Bureau.
Bottineau	Bottineau	1,638	57	63.3	+1.5	91	27	41	137	1.95	-1.24	0.68	25-26	0	8	2	23	5	ne.	N. D. School of Forestry.
Butte, 3 miles WSW	McLean	1,880	24	63.4	+0.9	93	2	42	18	3.07	-0.33	1.13	24-25	0	8	7	13	10	nw.	M. O. Anderson.
Carson, 2 1/2 miles SW	Grant	2,500	37	63.0	-0.7	94	8	39	19	3.74	+0.26	0.82	25	0	10	8	14	8	s.	J. W. Evens.
Center	Oliver	2,100	11	61.2	-2.5	93	2	35	19	3.07	-0.39	0.98	25	0	8	9	17	4	nw.	Fred L. Heinz.
Drake	McHenry	1,634	19	63.0	-0.8	94	2	41	187	1.98	-1.18	0.63	3-4	0	10	16	13	1	w.	Geo. A. Paulus.
Dunseith, 2 miles NNE	Rolette	1,682	53	61.2	-0.2	91	2	38	137	3.26	+0.25	0.83	24-25	0	10	15	10	5	s.	State Tuberculosis San.
Eckman	Bottineau	1,500	43	61.6	-0.4	90	17	34	18	1.44	-1.54	0.43	27	0	8	8	16	6	nw.	E. R. Sherman.
Fessenden	Wells	1,610	37	63.0	+0.4	91	2	42	127	4.87	+1.39	3.06	3-4	0	6	10	14	6	w.	John V. Zuber.
Fort Yates	Sioux	1,670	49	63.4	-3.2	95	9	35	19	3.12	-0.35	0.76	18	0	11	12	10	8	se.	P. J. Jacobson.
Foxholm, 6 1/2 miles NE	Ward	1,609	28	63.4	+1.5	94	1	38	18	2.23	-0.75	0.90	26-27	0	9	7	12	11	n.	U. S. Wildlife Refuge.
Garrison	McLean	1,911	72	62.1	-0.8	94	17	38	19	2.86	-0.56	1.09	2-3	0	10	4	14	12	n.	Mae H. Vorachek.
Granville	McHenry	1,504	42	62.5	-0.2	92	2	35	18	4.66	+1.47	2.33	25	0	9	15	10	5	nw.	Fred Roble.
Hansboro	Towner	1,597	41	60.4	-0.4	89	2	34	18	4.44	+1.12	0.98	21	0	9	5	18	7	nw.	W. E. Disher.
Harvey, 3 miles SE	Wells	1,596	46							2.72	-0.65	1.03	25	0	7	4	16	10	nw.	H. J. Reynolds.
Leeds	Benson	1,515	8	62.8		96	2	35	17	2.58	.....	1.32	25-26	0	8	5	16	9	nw.	John Fager.
Linton	Emmons	1,711	32	64.4	-0.8	95	9	36	19	2.65	-0.62	0.78	17-18	0	12	8	8	14	se.	Wm. Heyerman.
Maddock, 1 mile E	Benson	1,604	34	63.0	+0.8	95	2	38	17	2.72	-0.67	1.29	25	0						

Climatological Data for June 1948—Continued																				
Station	County	Elevation, feet	Length of record, years	Temperature, degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observer
				Mean	Departure	Highest	Date	Lowest	Date	Total	Departure from normal	Greatest in 24 hours	Date	Snowfall, unmelted	With .01 in. or more precip.	Clear	Pt. cloudy	Cloudy		
Western Division—Con.																				
Dickinson Airpt., 5½ mi. S.	Stark	2,587	8	60.2	.....	90	2	41	18†	3.79	.....	0.75	11	0	12	6	6	18	nw.	U. S. Airway Comm. Sta.
Dunn Center	Dunn	2,191	50	62.0	−0.5	95	1	37	19†	4.11	+0.41	3.45	3	0	5	20	4	6	nw.	F. R. Sommars.
Elbowoods	McLean	2,082	56	62.2	−1.2	92	1†	38	19	4.31	+0.63	2.34	3-4	1	8	9	13	8	nw.	H. W. Case.
Epping	Williams	2,224	40	62.6	−0.5	95	1	34	18	1.69	−1.62	0.55	1	0	9	8	15	7	nw.	T. Beachler.
Fairfield, 9¼ miles N.	Billings	2,650	20	.....	.....	.....	.....	.....	.....	2.82	−0.91	0.85	3	0	8	13	8	9	nw.	Mrs. Edith Larson.
Golva, 1 mile E.	Golden Valley	2,781	8	60.1	−2.5	90	1	38	19	2.32	−1.27	0.88	17-18	0	15	4	12	14	nw.	Chester K. Puda.
Grenora	Williams	2,114	40	63.0	+2.0	94	1	34	18	2.57	−0.39	1.96	24	0	6	12	11	7	se.	L. D. Nielson.
Halliday	Dunn	2,073	7	.....	.....	.....	.....	.....	.....	2.85	.....	1.45	3	0	8	5	19	6	nw.	John Kisse.
Hettinger	Adams	2,675	42	62.2	−1.8	90	9	39	19	4.27	+1.11	0.83	20	0	14	14	5	11	e.	Edgar Martin.
Kenmare	Ward	1,799	17	63.9	+1.5	93	1	35	18	1.11	−1.78	0.39	20-21	0	10	10	9	11	nw.	Theo. E. Eckberg.
Marmarth	Slope	2,714	40	62.8	−0.6	90	2	38	19	3.39	+0.26	1.25	17-18	0	15	9	8	13	nw.	S. P. Grane.
Medora, 14 mi. W.	Billings	2,271	34	.....	.....	.....	.....	.....	.....	2.65	−0.77	0.89	5	0	8	.....	.....	.....	.....	Harry Roberts.
Mott	Hettinger	2,424	42	61.2	−3.8	90	1†	40	19	4.18	+0.93	0.96	20	0	17	9	11	10	se.	Northern Pacific Agent.
New England	Hettinger	2,621	57	61.6	−2.0	93	2	38	19	3.77	+0.61	0.85	17-18	0	16	8	9	13	se.	Alfred Hasel.
Parshall	Mountrail	1,929	34	62.0	0.0	92	1	34	19	3.43	−0.06	1.18	3	0	12	4	21	5	ne.	C. E. Shubert.
Portal	Burke	1,954	35	61.4	+0.8	95	1	33	18	1.08	−2.01	0.41	2	0	8	15	9	6	nw.	U. S. Customs Service.
Powers Lake	Burke	2,205	44	61.1	−0.4	90	1	34	18	0.77	−2.52	0.35	5-6	0	5	7	17	6	ne.	E. J. Lewis.
Richardton, 14 miles N.	Stark	2,467	33	61.8	−1.3	91	2	41	19	5.52	+2.05	2.75	3	0	10	10	7	13	nw.	Assumption Abbey.
Ryder	Ward	2,108	20	.....	.....	.....	.....	.....	.....	2.57	−0.54	0.90	3	0	8	12	4	14	se.	S. C. Schellenbaum.
Sanish	Mountrail	1,835	23	61.2	−2.1	94	1	38	18†	2.79	−0.58	1.47	3-4	0	11	14	7	9	e.	H. J. Bugge.
Stanley	Mountrail	2,258	11	60.8	.....	91	1	36	18	1.25	−2.15	0.49	3	0	9	2	14	14	nw.	Leroy Edwards.
Tagus	Mountrail	2,179	20	.....	.....	.....	.....	.....	.....	0.91	−2.14	0.22	27	0	10	4	15	11	nw.	Geo. N. Pilgard.
Tioga	Williams	2,279	20	.....	.....	.....	.....	.....	.....	2.39	−0.67	1.79	25	0	5	15	7	8	se.	L. A. Simon.
Trotters	Golden Valley	.....	23	.....	.....	.....	.....	.....	.....	2.52	−0.81	0.79	17	0	14	5	20	5	nw.	Walter Grunewald.
Van Hook	Mountrail	1,864	8	62.8	.....	92	2	38	18†	2.69	.....	1.30	3	0	9	8	16	6	e.	Soil Conservation Ser.
Watford City	McKenzie	2,054	36	63.2	+0.1	95	1	37	18	1.87	−1.28	0.62	3-4	0	13	10	14	6	e.	J. C. Zeller.
Willrose	Williams	2,258	19	.....	.....	.....	.....	.....	.....	1.09	−2.01	0.23	5†	0	9	4	16	10	nw.	Jonathan Winkjer.
Williston	Williams	1,878	70	62.8	+0.1	95	1	37	18	1.63	−1.80	0.62	1-2	0	12	2	10	18	e.	U. S. Weather Bureau.
Average for Western Division				61.6	−0.9	95	1	30	18	2.77	−0.75	3.45	4	0	11	9	11	10	nw.	
Average for the State				62.4	−0.4	101	2	30	18	3.12	−0.40	3.45	4	0	10	9	12	9	nw.	

The departures from the normal temperature are computed from the averages of the entire period for stations having 10 or more years of record. The departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 45-year period; for stations of 10 to 14 years the means for the period of record are used.

Figures and letters following station indicate distance and direction of station from the city Post Office.

† Trace, precipitation 0.005 inch or less.

† And other dates.

‡ Best available used for stations not equipped with recorders.

Daily Temperatures for June 1948																																
Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
Ashley	Maximum...	88	90	87	72	75	79	80	84	93	79	56	74	79	76	65	67	54	62	73	58	65	60	73	78	72	71	77	77	74	77	73.8
	Minimum...	53	63	63	58	54	55	57	39	48	51	48	44	47	45	50	45	51	46	39	48	49	51	53	50	57	50	48	50	51	43	50.2
Bismarck Airport	Maximum...	90	92	81	77	80	83	81	87	92	75	60	74	77	71	68	69	56	68	73	62	66	66	75	77	71	73	77	80	76	81	75.3
	Minimum...	58	62	63	60	51	59	54	46	60	53	49	48	49	48	52	55	48	45	41	50	50	49	55	48	55	52	48	52	55	46	52.0
Bottineau	Maximum...	89	91	91	77	78	82	81	86	86	72	78	75	82	79	69	66	66	71	80	80	63	73	74	73	69	70	76	76	74	75	76.7
	Minimum...	55	64	60	59	52	59	50	45	59	50	44	42	41	49	42	49	41	42	45	47	51	47	53	49	56	50	51	52	48	44	49.9
Carson	Maximum...	91	92	81	76	81	82	82	94	91	79	65	75	75	73	65	63	61	70	71	62	63	68	74	70	65	73	76	77	75	80	75.0
	Minimum...	56	62	63	57	55	55	54	47	58	49	46	47	48	49	50	51	47	42	39	50	49	50	52	49	56	48	54	50	54	44	51.0
Crosby	Maximum...	95	89	79	68	72	81	80	90	73	65	69	76	81	69	67	59	63	71	77	64	66	69	76	68	73	74	82	77	76	85	74.5
	Minimum...	52	55	56	56	50	53	50	52	56	47	42	46	41	42	44	44	37	34	41	47	47	48	47	45	50	49	46	50	47	43	47.2
Devils Lake	Maximum...	90	93	80	78	75	80	76	79	81	69	62	73	79	66	71	60	64	69	79	73	66	69	73	69	62	71	75	75	70	75	73.4
	Minimum...	59	65	64	58	51	58	50	48	58	51	49	45	46	48	44	50	39	45	44	53	52	52	56	55	55	52	56	51	48	51.9	
Dickinson Airport	Maximum...	88	90	69	72	72	79	77	84	80	72	55	69	70	65	62	60	51	62	67	55	62	64	71	70	69	73	75	76	73	80	70.4
	Minimum...	55	58	59	57	56	54	55	51	51	48	48	44	46	50	49	51	44	41	41	48	48	48	51	51	51	47	49	50	51	45	49.9
Dunn Center	Maximum...	95	94	72	74	84	83	80	88	85	75	59	75	75	72	68	68	53	71	72	58	66	66	78	74	76	78	83	80	77	85	75.5
	Minimum...	43	57	63	58	55	51	47	56	55	51	44	43	45	48	52	49	40	37	52	49	46	51	53	41	45	42	47	50	37	48.4	
Fargo Airport	Maximum...	88	94	92	78	73	79	79	75	88	71	61	74	80	71	70	70	66	63	79	72	70	64	70	68	68	75	77	80	70	75	74.7
	Minimum...	58	65	63	62	54	57	53	51	57	54	49	42	46	51	43	51	52	50	44	51	53	55	59	56	53	56	51	58	50	44	52.9
Fessenden	Maximum...	88	91	84	83	72	79	74	83	82	85	70	69	75	73	70	68	67	66	73	72	68	66	72	71	63	68	72	75	73	75	74.2
	Minimum...	57	62	63	57	51	54	50	46	53	50	45	42	45	48	47	50	42	44	46	60	51	52	55	61	53	51	60	56	53	48	51.7
Fullerton	Maximum...	90	94	91	78	74	79	80	81	94	72	62	76	82	78	71	76	60	65	76	63	68	63	75	77	71	75	80	79	75	78	76.1
	Minimum...	51	58	64	61	55	56	56	45	49	54	46	42	47	50	50	42	53	39	42	47	51	53	58	52	58	52	50	53	48	55	51.2
Garrison	Maximum...	94	94	77	68	77	80	79	86	83	69	57	74	78	72	71	60	58	70	75	62	66	69	76	73	67	72	79	78	76	79	74.0
	Minimum...	55	60	63	58	51	58	54	47	58	51	48	41	45	50	47	52	48	41	38	51	49	46	54	49	51	51	42	51	53	44	50.2
Golva	Maximum...	90	85	72	71	73	81	82	85	78	73	62	64	67	69	68	58	51	63	66	57	67	62	72	70	66	72	71	76	73	84	71.1
	Minimum...	47	53	58	49	53	52	57	52	53	48	45	50	51	51	52	49	45	40	38	50	49	47	49	52	51	42	50	50	46	42	49.1
Grafton	Maximum...	89	95	91	78	76	78	78	83	71	70	71	81	81	69	68	68	71	82	81	72	68	72	71	70	68	75	78	76	71	76	76.0
	Minimum...	55	66	64	61	49	58	54	50	58	55	43	50	44	50	47	51	40	45	45	52	55	52	59	57	51	49	50	56	53	46	52.1
Grand Forks Airport	Maximum...	89	95	80	77	77	77	76	78	86	69	66	71	80	68	71	67	70	71	81	77	68	65	72	70	69	69	75	77	68	74	74.4
	Minimum...	54	66	65	57	53	45	50	48	56	48	45	47	43	48	46	51	38	48	43	52	56	55	60	57	52	54	53	55	48	43	51.2
Jamestown Airport	Maximum...	91	93	90	77	73	79	78	81	91	74	56	74	79	72	72	65	68	65	76	66	69	66	73	74	64	75	76	77	72	74	74.4
	Minimum...	58	62	63	58	54	58	51	45	55	52	48	41	44	54	43	49	49	47	42	50	50	53	55	51	57	49	50	51	50	44	51.1
Kenmare	Maximum...	93	90	80	75	77	85	81	90	80	73	68	79	86	68	69	59	62	77	79	62	62	69	78	70	75	75	82	82	79	80	76.2
	Minimum...	57	63	62	59	49	60	55	55	44	51	45	48	50	48	43	47	40	35	45	52	50	51	54	51	57	54	50	52	51	50	51.6
Langdon	Maximum...	87	92	85	81	76	80	72	81	83	72	68	73	79	77	72	68	68	75	84	77	64	68	69	70	65	60	75	77	72	73	74.9
	Minimum...	56	61	61	56	45	57	46	42	59	48	42	42	40	48	43	46	36	39	41	48	52	53	55	53	50	53	45	53	48	42	48.6
Marmarth	Maximum...	88	90	78	75	74	81	80	85	85	77	68	62	72	70	66	64	68	62	65	66	67	66	72	70	66	74	72	76	75	83	73.2
	Minimum...	52	58	57	60	58	55	55	48	58	50	50	50	50	50	55	58	56	45	38	58	52	56	52	52	52	45	50	55	53	45	52.4
Minot Airport	Maximum...	92	93	80	75	77	83	79	87	79	67	61	75	80	66	70	55	63	70	76	65	65	68	74	72	66	68	76	76	75	79	73.8
	Minimum...	56	65	62	65	49	60	56	50	58	52	51	47	46	50	44	47	39	37	44	52	51	49	56	52	55	51	48	52	53	50	51.2
Mott	Maximum...	90	90	82	73	74	79	79	78	84	75	70	70	71	66	64	63	61	63	64	62	63	64	72	74	70	73	75	76	76	77	72.6
	Minimum...	53	52	60	56	55	52	54	48	55	50	46	41	43	50	51	50	46	44	40	48	50	51	53	49	53	46	45	50	53	50	49.9
Pembina Airport	Maximum...	88	93	84	78	76	75	70	78	80	65	70	69	78	64	69	63	65	68	80	76	63	68	69	68	66	64	75	74	67	74	72.6
	Minimum...	55	64	63	57	50	57	54	48	59	51	44	48	46	46	48	41	42	48	52	55	52	58	56	50	52	46	55	50	44	55	51.2
Sbaron	Maximum...	87	91	85	78	73	80	78	78	88	72	59	76	65	80	67	70	64	65	65	81	73	66	65	74	68	71	77	76	75	76	74.1
	Minimum...	57	63	64	58	50	56	51	45	56	49	53	43	47	42	57	40	44	39	47	41	50	51	55	56	52	51	49	53	51	43	50.4
Steele	Maximum...	89	90	79	73	76	80	78	81	90	75	74	75	75	71	69	67	57	66	73	64	66	66	72	74	72	74	72	77	73	76	74.2
	Minimum...	55	60	60	58	48	54	57	45	53	46	40	43	45	48	44	50	46	43	38	47	49	48	48	54	54	47	46	47	52	43	48.9
Valley City	Maximum...	89	92	90	78	76	78	79	76	89	87	71	75	80	76	71	67	66	64	75	76	76	64	74	72	78	79	78	79	78	75	76.4
	Minimum...	56	62	69	62	56	57	56	50	55	54	50	45	42	52	44	51	49	48	44	50	51	55	56	52	50	54	54	54	45	52.6	
Wahpeton	Maximum...	87	92	92	89	74	79	79	75	87	85	71	75	81	78	72	74	71	64	76	76	74	72	72	78	78	81	78	81	78	73	77.5
	Minimum...	55	64	66	62	52	57	56	56	53	67	48	43	47	53	51	45	55	50	44	51	57	57	58	59	6						

Daily Precipitation for June 1948

Station	Drainage Basin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Eastern Division																																	
Carrington ²	James Red.			T.	.50	.38							.04				.06	.01				.71					.62						2.32
Casselton.	Red.																	.13	.10		.09	.57		.50		.26	.37						4.29
Cooperstown	Sheyenne		1.67	.41			.07	.12										.02	.15		.25	.61	.02	.05	.44	.28							2.46
Courtenay	James		T.	.20	.36								.02					.03	.15		.25	.61	.02	.05	.44	.28							2.50
Devils Lake ¹⁵	Devils Lake		.51		T.	.09				.03											.50	.22		.10	.99				.03	T.			3.92
Edgeley	James		T.	.41	.21	T.	.20				.07	.32	.06				T.	.20	1.00		.58	.46	.10	T.	.50	.01			T.				2.18
Edmore	Devils Lake	.08	T.				.20			T.											T.	1.11		.20	.15	.44			T.				4.57
Ellendale	James			.29		.08				.26		.09	.21					.32	.99		.52	.18			1.63						.01		4.67
Fargo ¹⁵	Red.		1.69	.18		.11				.27	.04	T.					T.	.06	.46		.37	.33	.99	.06	T.	T.							4.57
Forman	Sheyenne			.65		.05						T.	.10					.18	1.18		.30	.65	.77	.06		.06							4.00
Fullerton.	James			.37						.15		.32			T.			.14	.56		.71	.10	.12			.17							2.84
Gackle	do																																
Grafton	Red.			.65			.24	.02		.08												1.10	.15	2.92					.02	.24			5.42
Grand Forks Airport ³	do		T.	1.88			.46			.06						T.		.02		T.		.25	.56	2.05	.38		.51		.17	.06			5.76
Hankinson ²	do			.72				T.										T.	1.72	.03		.74	.35	2.13	.03								6.01
Hannah	Pembina	.12	.73		.32	.15				.52											T.	.60			.48	1.12							4.04
Hillsboro.	Red.		1.01	.24		.15	.04			T.	.08						T.	.05	.09		T.	.74	.36	.47	T.	.38			T.	.03			3.61
Jamestown Airport ³	James		1.17	.02		.01						.17						.30	.20		.69	.07	.13	.11	T.	.15							3.02
Langdon	Pembina		.12			.15	.02			.51								.02				.82		.38	.15	.02	.38				.08		2.65
Larimore	Red.		.90			.20				.02							.02				.16	.70	.36	1.14	.02	.21				.03			3.76
Lisbon	Sheyenne	T.	.86	.16	.06			T.				.25					T.	.12	.03		T.	.86		.59		.15			.07			3.08	
Mayville	Red.		.78	.18		.04				.02					.02		.01	T.	.07		T.	.70	.43	.20		.08	.15		.07	.01			2.76
McHenry	James		.52	.03	.03	.03	.04										.13				.07	.37		.10	.43	.54			.03			2.29	
McLeod	Sheyenne			.70	.13	T.						.10					T.	.70	.15		.27	.54	1.02	.20		.02						3.81	
Oakes ²	James			.34	.20	.19					.06		.15					.84				.75	.03	.21		.02	.80		.03			3.02	
Park River	Red.		.20			.41				.15						.09					1.25	.11	1.99		.36	T.			T.			4.56	
Pembina Airport ³	do		.42	.75		.75			T.	.04						.02	.01				.43	.76	1.02	T.	.02	.34			.08	.10		4.74	
Petersburg	do		.18	.56	.03	.29	.01									.08					.04	.98	.21	1.20		.68						4.26	
Sharon	do		.20	.17		.06				T.								.06				.05	.78	.30	.80		.47					2.89	
Valley City	Sheyenne		.50	.45		.07	.03		.03		.07	T.			T.					T.	.50		.15	.67	.35	.29		.15				3.26	
Wahpeton	Red.			1.57		.02	.05				.14	.07	T.		T.				.97	.04	.07	.64	1.27	.09		.05		T.				4.98	
Middle Division																																	
Ashley ³	Missouri			.01		.03							.45			.05				.80		1.15			.10		1.00	.05					3.64
Bisbee	Devils Lake	.12	.14			.10				T.											.82	.14			1.08							2.40	
Bismarck Airport ¹⁵	Missouri		.16	.02	.08		.10				T.				T.	T.		.39	.01		.38	.05		1.07	.42					T.		3.42	
Bottineau ²	Mouse					.10			.08	T.							.06				.02		.52	.01		.68	T.	.48				1.95	
Butte	do		.74	.20		.06						.14					.43				.05	.32			1.13							3.07	
Center.	Heart				T.							.62	T.			.20	.09	.25	.50		.50	.04		.70	.82	.02						3.74	
Carson	Missouri		.15		.11							.45		.12			.02	.02			.35	.03		.80	.98							3.07	
Drake ²	Mouse		.81		.63		.08		T.		.02	T.				.02	.02				.49	.03	T.	T.	.13	.42				.04		1.98	
Dunseith	do					.30				T.	.10					.02		.04			.39	.10		.29	.08		.20	.15		.25	.03		3.26
Eckman	James		2.95	.11								.35		.14	.10	.10		.39			.59			.73								1.44	
Fessenden	Missouri			T.	T.	T.		.01			.05	T.			.01	.10		.12	.76		.66	.36	.19	.60	.04			T.		.01		3.12	
Fort Yates	Mouse											.13					.08				.23	.51		.12	.31					.03		2.23	
Foxholm	Missouri		.61	.83	.15	.04						.02	.03				.05	.02			T.	1.03			.12	.31						2.86	
Garrison ³	Mouse		.90	.22						.64							.05	.02			.07	.93			.23	.33					.06		4.66
Granville	Devils Lake		.70			.52										T.		.05	.02		.07	.93			.81	.70		.01	.01			4.44	
Hansboro	Missouri			T.								.55	.02	T.	.05	.06		.10	.68		.33	.05	.18		.02	.55						2.65	
Linton	Sheyenne		.44	.17		.04				T.	T.			T.	.05	.06		.08		.10		.33	.05	.01		1.29	.18		.02	.05	T.	2.72	
Maddock	Missouri			.04	T.	.04						.10	.64							.50		.34	T.		.13	.53						2.32	
Mandan ²	do		.88	1.55		.10						.03	.15						.10			.30	.78		.27	.58						3.96	
Max ²	do			.36								.10									.32	.38			.24	.68						2.06	
McClusky	Mouse	T.	.05	.39		.07		T.		T.	T.	T.			T.	T.	.10				.10	.09	.32		.13	1.01		.05	.22	.03		2.25	
Minot Airport ³	do		.13			.03				.21			.67	.06		.03	T.			.20	.63			.36	.20	.08		.03				3.25	
Mohall	Missouri			T.	.80			.04					.70					T.	.27	.23		.41	.04			.50	.04					2.52	
Napoleon	Heart		.02	T.	.45		.04								.02						.29	.12	.10									0.98	
New Salem	James			T.	.55	.06		.43													.02	.79		T.		.69	1.05		.06			T.	4.81
Pettibone	Devils Lake		.03	.10						.03						.06	T.				.20	.28				1.50	.02			.08		2.30	
Rolla	Mouse		.40	T.								.52		.32	.15	.06	T.				.70	.15	T.		.15							2.81	
Rugby	Missouri			.12	.38						.56	T.					1.20			.17	.19		.27	.27	.06	T.	.03	.74	.02			2.13	
Selfridge	do			T.	.28		T.						.12				.14					.41				1.30						2.54	
Towner	Mouse		.06	.83	.10		.04					.33	.01							.02	.16		.41		.20	.62					T.	2.51	
Turtle Lake	Missouri			.75		.01						.43									.19	.04			.05	1.32						3.50	
Tuttle	do			.18	T.	.04															.19	.04										2.48	
Underwood	do			.83	T.	.01																.08										2.39	
Velva	Mouse		.05	.71	.11		.11					.06									.08	.22				1.15	.02		.02	T.		3.63	
Washburn	Missouri			.65								.35							.04			.28	.09									2.01	
Westhope	Mouse		.12								.13									T.		.51	T.	T.		2.70						2.88	
Willow City	do		.32																														

Except as otherwise indicated, amounts are for 24-hours ending late in the afternoon.

1 Midnight to midnight.

2 Measured in the morning; for the preceding 24 hours.

³ Data for 24 hours ending 12:30 a. m. C.S.T. of the following day.

⁵ Recording gage.

T. Trace, or 0.005 inch or less

*Included in the next measurement.

[WBO, Minneapolis, 8-4-48-1200]

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CLIMATOLOGICAL DATA

NORTH DAKOTA

JULY 1948

Volume LVII No. 7



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NORTH DAKOTA - JULY, 1948

F. J. Bavendick, Section Director - Bismarck

UNIVERSITY OF ILLINOIS

GENERAL SUMMARY

The temperature in North Dakota was consistently above normal during the first two weeks of July and slightly below normal during the remainder of the month. Readings were above 100° at a few stations in the northwestern part of the state on the 5th and 100° or above occurred at many stations in the remainder of the state on the 6th. Most stations in the southern and central parts of the state had about eight days with readings of 90° or above, while in the northern third of the state, 90° or above occurred only on about four days. Minimum temperatures were mostly in the low fifties during the last half of the month with maximum temperatures in the seventies; this is usually the hottest time of the year.

Precipitation was above normal in all parts of the state and was nearly as heavy in the western sections as in the Red River Valley, but the Red River Valley had an excess of moisture in some places from earlier rains and from spring floods. Heavy rains occurred in the northeastern part of the state during the first three days, but most of the precipitation occurred during the second and third weeks in all other sections. Rain fell when needed at most places, although a few sections suffered due to lack of moisture.

A windstorm and hailstorm occurred late in the evening on July 20th. About a dozen small farm buildings were blown down in Grant County and southwestern Morton County. Storms also occurred in the Williston area on the 3rd and 24th, causing some damage to crops and small buildings. There were numerous thunderstorms but very few of them were severe. Hail losses were about normal.

Crops were generally very good at the close of the month, although the heat and dry weather early in July caused some crop damage, especially in some southeast and central sections. A small amount of lodging occurred due to wind and rain on the heavy grain. Small grain was along far enough to indicate another excellent crop. Corn and potatoes were making very good progress. An excellent hay crop was also put up during the month. Pastures afforded ample feed for livestock and livestock were mostly in good condition.

TEMPERATURE

The mean temperature for the state was 69.3°, or 0.3° above the 1892-1948 average for July. The mean temperature for the eastern division was 70.2°; for the middle division, 68.9°; and for the western division, 68.5°. The highest mean temperature was 73.8° at Forman, and the lowest, 64.6° at Hansboro, making a range in mean temperature of 9.2°. The absolute range was 74.0°, from 108° at McLeod on the 8th, to 34° at Upham on the 27th. The average daily deficiency in temperature for the state since January 1, 1948 is 0.9°.

PRECIPITATION

The average precipitation for the state was 4.04 inches, or 1.60 inches more than the 1892-1948 average for July. In the eastern division the average amount was 4.19 inches; in the middle division, 3.97 inches; and in the western division, 3.98 inches. The greatest monthly amount reported was 10.68 inches at Pembina; the least was 1.61 inches at Almont. The greatest amount recorded in any 24 consecutive hours was 4.34 inches at Tagus on the 14th. The accumulated excess in precipitation for the state since January 1, 1948 is 1.15 inches.

NORTH DAKOTA
JULY 1948

TABLE 1
COMPARATIVE DATA

YEAR	TEMPERATURE			PRECIPITATION					
	MEAN	HIGHEST	LOWEST	AVERAGE	DIVISION			AVERAGE SNOWFALL	Days, .01 or more
					EASTERN	CENTRAL	WESTERN		
1892	68.7	108	31	3.23	3.44	2.98	3.28	0	8
1893	69.5	112	35	2.04	2.54	1.94	1.64	0	7
1894	71.7	107	38	0.63	0.92	0.73	0.25	0	3
1895	66.1	102	29	2.90	3.12	2.44	3.13	0	8
1896	67.5	107	31	1.51	1.67	1.48	1.37	0	6
1897	68.9	109	38	4.43	6.46	4.43	2.40	0	9
1898	67.6	106	28	2.49	3.07	2.40	2.00	0	7
1899	68.3	109	32	2.34	2.37	2.30	2.35	0	6
1900	67.9	107	33	2.25	2.89	2.26	1.60	0	6
1901	70.8	110	40	4.28	5.10	4.08	3.66	0	6
1902	67.6	106	34	2.15	2.34	2.00	2.10	0	5
1903	66.7	109	26	2.23	2.59	1.77	2.32	0	7
1904	64.4	102	34	2.13	2.96	2.83	0.60	0	6
1905	65.6	100	32	3.78	4.27	3.90	3.17	0	8
1906	66.9	102	34	1.56	2.90	1.32	0.45	0	11
1907	65.8	103	31	3.06	2.69	3.90	2.60	0	9
1908	68.6	103	31	1.91	1.89	2.37	1.46	0	6
1909	67.1	99	34	2.73	3.45	2.94	1.80	0	8
1910	70.0	114	33	1.60	1.30	2.10	1.40	0	5
1911	65.1	107	23	1.70	2.25	1.76	1.10	0	6
1912	66.0	106	30	3.66	4.52	3.07	3.38	0	10
1913	65.6	103	35	2.22	2.64	2.38	1.65	0	8
1914	72.1	109	36	2.17	2.62	1.85	2.03	0	6
1915	62.3	97	30	3.13	2.42	2.66	4.30	0	11
1916	73.1	105	33	2.96	4.71	2.76	1.41	0	7
1917	70.9	114	27	1.54	1.96	1.80	0.87	0	7
1918	65.5	102	34	2.73	2.84	2.90	2.46	0	7
1919	71.2	105	37	1.86	3.15	1.11	1.32	0	5
1920	68.3	103	31	2.11	2.27	2.33	1.73	0	7
1921	71.4	110	35	3.07	4.47	2.87	1.88	0	7
1922	65.6	100	30	2.48	2.28	2.44	2.72	0	8
1923	71.2	103	35	3.05	2.90	3.34	2.91	0	8
1924	65.5	99	32	1.93	1.93	2.04	1.83	0	6
1925	66.7	106	29	1.35	1.43	1.33	1.30	0	6
1926	70.3	108	32	2.04	2.35	1.78	1.99	0	7
1927	65.4	97	28	2.84	2.33	3.11	3.09	0	9
1928	67.4	96	38	4.82	4.65	5.32	4.49	0	10
1929	70.6	109	34	1.27	1.93	1.09	0.78	0	5
1930	72.3	107	34	1.04	1.83	0.80	0.49	0	5
1931	70.6	111	37	3.03	2.89	3.20	3.01	0	8
1932	70.0	108	36	1.95	1.95	2.22	1.68	0	7
1933	71.9	109	36	2.00	2.04	2.13	1.83	0	7
1934	71.8	112	29	1.18	1.58	1.30	0.77	0	6
1935	73.8	110	45	4.41	3.90	5.44	3.90	0	10
1936	79.9	121	38	0.70	0.71	0.48	0.92	0	4
1937	71.7	111	40	2.93	3.70	2.70	2.40	0	9
1938	69.7	104	39	3.34	3.11	3.85	3.05	0	9
1939	72.6	108	37	1.81	1.57	1.82	2.04	0	7
1940	71.6	107	37	3.70	4.29	3.75	3.05	0	11
1941	70.8	106	34	1.76	1.40	1.65	2.23	0	8
1942	67.1	97	36	2.43	2.71	2.86	1.73	0	7
1943	70.5	103	41	2.72	2.88	3.14	2.13	0	8
1944	67.6	102	33	1.74	3.41	1.08	0.74	0	6
1945	67.8	102	30	2.31	2.58	2.50	1.85	0	9
1946	70.6	110	34	2.17	1.64	2.23	2.65	0	7
1947	70.4	103	33	1.79	1.86	1.96	1.56	0	6
1948	69.3	108	34	4.04	4.19	3.97	3.98	0	10
PERIOD	69.0	121	23	2.44	2.77	2.48	2.08	0	7

PRESSURE, WIND, HUMIDITY, SUNSHINE, DEGREE DAYS

STATIONS	SEA LEVEL PRESSURE EXTREMES - INCHES				WIND				RELATIVE HUMIDITY AVERAGES				SUN- SHINE	DEGREE DAYS 65° BASE
	HIGHEST	DATE	LOWEST	DATE	AVERAGE SPEED M.P.H.	MAXIMUM SPEED M.P.H.	DIRECTION	DATE	1:30A EST	7:30A EST	1:30P EST	7:30P EST	PERCENT OF POSSIBLE	
BISMARCK AIRPORT	30.15	31	29.53	29	9.9	40	NW	29	81	85	52	52	66	9
DEVILS LAKE	30.11	13	29.50	29	8.2	26	NW	26	11	85	59	57	68	37
FARGO AIRPORT	30.12	14	29.39	29	11.6	48	NW	29	82	85	57	57	60	8
WILLISTON	30.15	31	29.48	28	7.4	44	W	24	73	82	50	45	84	18

TABLE 2
CLIMATOLOGICAL DATA

NORTH DAKOTA
JULY 1948

STATION	TEMPERATURE, IN DEGREES FAHRENHEIT								PRECIPITATION, IN INCHES									
	MEAN	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	NO. OF DAYS		TOTAL	DEPARTURE FROM NORMAL	GREATEST DAY	DATE	SNOWFALL (UNMELTED)			NO. OF DAYS		
							MAX. 90° OR ABOVE	MIN. 32° OR BELOW					TOTAL	GREATEST DEPTH ON GROUND	DATE	.01 INCH OR MORE	.25 INCH OR MORE	1.00 INCH OR MORE
EASTERN DIVISION																		
ARVILLA STATE PARK	70.0		102	6	44	18	8		3.94		1.09	4				11	5	1
BALDHILL	70.7m								2.87		1.25	21				11	4	1
CARRINGTON	69.4		102	7+	45	22+	8		5.61	+3.00	1.40	21				10	8	2
CAVALIER POWER PLANT	67.6	-1.4	94	8	45	2	4		6.01	+3.37	1.45	21				12	8	2
COGSWELL									3.30		1.15	19				6	3	2
COLGATE RR STATION									4.18	+1.65	1.17	20				9	5	1
COOPERSTOWN	70.3	+0.7	98	6+	49	23	9		5.42	+2.83	1.15	4				11	8	1
COURTENAY									3.04	+ .42	.61	20				10	7	
DEVILS LAKE WB CITY	68.8	+1.4	98	7	49	18	6		2.67	+ .10	1.10	15				10	4	1
EDGELEY EXP FARM	70.9	+1.0	100	6	50	18+	8		4.30	+1.73	1.06	21				8	5	3
EDMORE 1 W	68.3	+0.8	91	4	45	18	5		4.32	+1.48	1.45	15				13	5	1
ELLENDALE NORMAL SCHOOL	70.8	-0.1	100	6	51	31	9		5.69	+3.04	1.13	25				8	6	3
FARGO WB AIRPORT	71.2	+3.1	101	6	50	23	8		4.10	+ .67	1.59	20				9	3	1
FORMAN	73.8m	+3.7	102	6	51	23	9		4.60	+1.72	1.10	25				8	7	1
FULLERTON	72.8	+2.6	104	6	50	23	9		2.06	- .82	.61	20				7	4	
GRAFTON STATE SCHOOL	69.7m	+0.9	93	7+	41	18	5		4.40	+1.34	1.64	21				11	6	1
GRAND FORKS CAA	69.6	+1.1	96	8	50	1+	5		4.16	+1.38	.89	3				12	8	
GRAND FORKS UNIVERSITY	69.8m	+1.3	97	8	49	18	5		4.80	+2.02	1.16	3				14	6	1
HANKINSON RR STATION	72.6	+1.2	99	7	52	1	8		2.40	- .47	1.15	21				7	2	1
HANNAH	66.8	+0.6	91	5+	44	30	2		4.32	+1.89	2.10	14				8	4	2
JAMESTOWN CAA	70.7	+1.1	98	6	48	31	8		3.73	+1.03	.98	20				10	6	
JAMESTOWN STATE HOSPITAL	72.0	+2.4	104	6	49	23	9		2.84	+ .14	.73	11				10	4	
KENSAL WILDLIFE REFUGE	68.4		99	6	45	23	6		6.30		1.57	15				12	8	1
LA MOURE	71.8		100	6	49	23	10		2.40		.80	21				10	4	
LANGDON EXP FARM	67.5	+1.2	99	7	43	18	5		4.01	+1.51	1.53	21				10	6	1
LARIMORE	69.0	+0.9	91	5	50	1+	4		3.97	+1.03	.95	4				11	6	
LISBON	71.3	+0.9	101	7	47	23+	9		5.82	+2.92	3.01	21				7	3	2
MAYVILLE	70.5	+0.3	101	7	48	28	7		5.23	+2.52	1.35	3				12	9	1
MC HENRY 6 N	68.4	+0.3	102	6	47	22	6		4.16	+1.36	1.03	20				12	6	1
MC LEOD 3 E	72.7	+1.3	108	8	49	18	9		1.69	-1.16	.90	21				4	2	
MILNOR	72.6		102	6	49	23+	11		2.67	- .12	.82	21				8	5	
MUNICH 4 SW	67.4		92	5	46	18	4		4.37		1.41	14				12	3	3
OAKES WATER WORKS	73.3	+1.6	102	7	51	23	9		3.86	+1.01	1.8	25				6	4	2
PARK RIVER	69.4m	+0.9	93	7			4		4.45	+1.84	1.78	21				7	5	2
PEMBINA CAA	68.2	+0.4	93	7	48	18	2		10.68	+8.27	3.02	2				15	9	4
PETERSBURG	68.5		93	8	48	22	4		4.27	+1.31	.80	15				7	6	
SHARON	68.8	-2.0	96	6	49	18	4		4.43	+1.74	.85	25				13	7	
VALLEY CITY	72.0	+1.9	100	6	49	23	9		3.17	+ .45	1.19	21				8	4	1
WAHPETON STATE SCHOOL	73.2	+2.3	103	6	51	23+	9		3.36	+ .41	1.50	20				9	5	1
DIVISION	70.2	+1.1	108	8	41	18	7		4.19	+1.42	3.02	2				10	5	1
MIDDLE DIVISION																		
ASHLEY	70.8m	+1.1							3.65	+ .99	1.10	2				6	4	2
BELCOURT INDIAN RES	65.0		92	7	39	18	2		3.63		1.10	21				11	5	1
BISBEE	67.1	-0.3	95	7	45	22	8		6.34	+3.64	2.34	14				11	5	2
BISMARCK WB CITY	71.6m	+1.1							1.83	- .45	.86	15				6	2	
BISMARCK WB AIRPORT	71.5	+2.1	104	6	47	27	9		2.35	+ .11	1.42	20				8	3	1
BOTTINEAU	67.7	+0.1	94	5	45	18	7		6.31	+3.92	1.97	15				12	5	3
BOTTINEAU STATE PARK	68.4		91	5+	51	28+	3		5.15		2.02	15				12	4	2
BUTTE 4 W					49	18+			4.55	+3.36	1.55	23				8	6	1
CARSON 2 SW	70.0	+0.8	101	6+	46	22+	9		4.14	+2.15	1.93	20				12	4	1
CENTER	67.9	-3.1	101	6	36	1	7		1.96	- .46	.58	14				8	3	

SEE REFERENCE NOTES FOLLOWING STATION INDEX

NORTH DAKOTA
JULY 1948

TABLE 2 — Continued
CLIMATOLOGICAL DATA

STATION	TEMPERATURE, IN DEGREES FAHRENHEIT								PRECIPITATION, IN INCHES									
	MEAN	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	NO. OF DAYS		TOTAL	DEPARTURE FROM NORMAL	GREATEST DAY	DATE	SNOWFALL (UNMELTED)			NO. OF DAYS		
							MAX. 90° OR ABOVE	MIN. 32° OR BELOW					TOTAL	GREATEST DEPTH ON GROUND	DATE	.01 INCH OR MORE	.25 INCH OR MORE	1.00 INCH OR MORE
DRAKE	69.5	-2.1	101	7	49	22	8		4.35	+2.05	1.45	15				8	4	2
DUNSEITH ST SANITARIUM	67.7m	+0.7	99	5	45	20	4		3.46	+ .79	1.92	15				11	3	1
ECKMAN	67.7	-0.3	93	6	46	22	3		4.19	+2.10	2.52	15				9	3	1
FESSENDEN	69.6	+0.2	97	6	49	27	4		3.35	+ .78	.77	20				9	5	
FORT YATES	72.0	-0.7	103	6	44	27	10		1.82	- .26	.75	15				7	2	
FOXHOLM WILDLIFE REF	68.7	-1.0	95	6+	41	31	4		3.02	+1.09	.97	14				11	3	
GARRISON	69.2		100	5	44	22	8		3.87	+1.38	2.29	14				10	2	1
GRANVILLE	68.8m	+0.1	96	6	48	22	2		4.61	+2.34	2.21	14				10	5	1
HANSBORO	64.6	-1.7			44	18			3.07	+ .53	.84	21				9	4	
HARVEY WATER WORKS									1.97	- .43	.63	15				10	3	
LEEDS	68.9m																	
LINTON	72.3	+0.4	102	6	45	27+	10		4.86	+2.73	1.85	11				8	4	2
MADDOCK AGR SCHOOL	69.1	+0.2	99	6	43	30	7		2.48	- .21	.73	15				11	3	
MANDAN EXP STATION	70.7	-1.2	104	7	48	22+	7		2.28	- .03	1.00	15				9	2	1
MANDAN FT LINCOLN PARK	72.0		107	5	49	23	10		2.03		.77	15				9	4	
MAX	68.0	-3.4	99	7	44	31	7		6.56	+4.02	1.46	14				9	6	3
MC CLUSKY	69.5m	-0.9	99	8			8											
MEDINA 1 W									4.53		1.15	15				6	5	1
MINOT CAA	69.2	+0.4	98	5	48	22	5		5.84	+3.79	2.37	14				12	7	1
MINOT EXP FAI	68.2		98	5	47	18+	5		5.07		2.43	14				11	6	1
MOFFITT RR STATION									4.56		3.40	21				7	2	1
MOHALL	66.5m	-1.0			45	18+			6.27	+3.82	1.66	20				11	6	2
NAPOLEON 2 SE	69.8	+0.4	100	6	49	22	6		5.55	+3.04	1.68	11				11	6	2
NEW SALEM 1 S	70.1	-0.7	103	5+	46	29	9		2.61	+ .44	.80	20				8	4	
PETTIBONE	69.2	-0.3	104	6	44	23	10		5.10	+2.36	1.36	15				8	5	2
ROLLA	66.3	-0.4	91	5+	47	18	2		3.60	+ .92	1.95	14				9	4	1
RUGBY 1 S	68.2		95	6	48	22	5		6.50	+3.82	1.88	14				12	6	2
SELFRIDGE									1.75	- .19	.80	15				5	3	
SHERWOOD									5.61		2.00	14				9	6	2
STEELE	69.5	-0.7	100	6	47	27	5		4.51	+1.69	1.69	20				10	6	1
TIMMER									3.90	+1.95	1.02	15				9	4	1
TOWNER	67.7	-1.4	97	6	40	31	7		5.05	+2.64	2.42	15				7	4	2
TURTLE LAKE	69.7	+0.2	101	6	45	22	5		3.35	+ .80	1.56	13				11	4	1
TUTTLE 8 SW									1.90	- .73	.76	15				7	3	
UNDERWOOD 11 SW	69.3	-2.6	101	5	41	31	9		3.21	+ .81	1.21	14				10	5	1
UPHAM WILDLIFE REFUGE	67.4		100	5	34	27	9		5.65		1.82	15				11	6	1
VELVA	69.0	-1.0	98	5	50	22	3		5.17	+2.85	1.62	14				11	6	1
WASHBURN			102	6			3		1.75	- .87	.47	15				8	3	
WESTHOPE	68.5	+0.6	93	5	47	18	5		4.50	+2.18	1.48	15				11	6	1
WILLOW CITY	67.9	+1.3	93	4+	45	18	6		4.18	+1.89	1.46	15				8	4	2
WILTON RR STATION	68.9m	-1.5	101	2	46	23+			2.69	+ .38	1.08	21				9	3	1
WISHEK	70.2	-0.2	100	7	43	31	8		3.70	+1.10	1.46	21				10	3	2
DIVISION	68.9	-0.5	104	6+	34	27	6		3.97	+1.49	3.40	21				9	4	1
WESTERN DIVISION																		
ALMONT 7 SW	71.5		102	5	45	22	8		1.61		.69	20				13	2	
ALPHA 1 S									4.37	+2.33	1.20	14				11	5	3
AMIDON	67.9	-2.5	100	8	42	22	4		4.16	+2.02	1.03	14				17	7	1
BELFIELD	67.7	-2.3	97	6	41	22	5		4.54	+2.32	1.32	14				10	5	2
BEULAH									2.88	+ .59	.69	14				11	5	
BOWBELLS RR STATION	66.0	-1.5	95	5	44	18	5		3.84	+1.61	1.50	21				11	3	2
BOWMAN COURT HOUSE	68.8m	-2.1	95	5	41	23	4		4.12	+2.04	1.75	15				10	4	1
CROSBY	66.7	-1.2	99	6	44	27	5		3.88	+1.80	1.16	21				13	5	1
DICKINSON CAA	68.1	-0.9	97	5	44	22	4		3.77	+1.56	1.14	14				12	5	1
DICKINSON EXP STATION	67.5	-1.5	97	6	41	22	4		3.18	+ .97	.81	15				13	3	

SEE REFERENCE NOTES FOLLOWING STATION INDEX

TABLE 2 — Continued
CLIMATOLOGICAL DATA

NORTH DAKOTA
JULY 1948

STATION	TEMPERATURE, IN DEGREES FAHRENHEIT								PRECIPITATION, IN INCHES									
	MEAN	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	NO. OF DAYS		TOTAL	DEPARTURE FROM NORMAL	GREATEST DAY	DATE	SNOWFALL (UNMELTED)			NO. OF DAYS		
							MAX. 90° OR ABOVE	MIN. 32° OR BELOW					TOTAL	GREATEST DEPTH ON GROUND	DATE	.01 INCH OR MORE	.25 INCH OR MORE	1.00 INCH OR MORE
DUNN CENTER	68.7	-0.3	98	6	43	22	11		5.41	+3.08	1.20	15				13	8	1
ELBOWOODS	69.0	-0.9	100	7	36	17	5		2.86	+ .45	.72	14				9	5	
EPPING	68.8	-2.0	100	5	43	27	8		3.29	+1.24	.96	20				10	6	
FAIRFIELD 9 N									3.92	+1.64	1.10	20				9	5	2
GOLVA									3.83	+2.01	1.15	12				9	6	1
GRENORA	69.6	+2.2	101	6	45	30	10		2.25	+ .41	.63	12				7	3	
HALLIDAY									3.34		.89	20				11	5	
HETTINGER	69.0m	-2.7	95	5	43	26	7		2.67	+ .39	.98	14				12	4	
KENMARE			97	6	48	15	6		4.09	+1.49	1.84	15				11	3	2
MARMARTH	70.1m	-1.1	98	6	46	22+	4		3.95	+2.04	.85	14				13	7	
MEDORA STATE PARK									4.37	+2.48	1.43	14				6	4	2
MOTT RR STATION	68.6	-3.0	97	5+	43	22	6		2.48	+ .35	.70	20				11	2	
NEW ENGLAND	68.8	-1.7	98	7	45	22	5		4.59	+2.46	1.35	15				12	5	1
PARSHALL	67.8	-1.8	100	5	41	27	5		3.38	+1.16	.85	14				12	5	
PORTAL	67.2	-0.8	95	6	42	18	5		4.42	+2.35	1.63	21				12	5	1
POWERS LAKE	68.2	-2.9	95	5	44	18	7		9.84	+7.57	3.75	13				8	5	3
RICHARDTON ABBEY	68.7	-2.4	96	5	45	22	4		3.01	+ .55	1.45	20				8	3	1
RYDER									5.71	+3.48	3.80	14				10	5	1
SANISH	67.6m	-3.1	103	6	44	26+	7		4.93	+2.91	1.71	15				8	4	2
STANLEY					39	1			3.67	+1.54	1.29	14				10	5	1
TAGUS									8.51	+6.46	4.34	14				15	4	3
TIOGA									2.71	+ .68	1.16	20				5	3	2
TROTTERS									4.32	+2.56	1.74	13				10	7	1
VAN HOOK	68.6m		100	5	43	27	6		4.01		1.33	14				9	6	1
WATFORD CITY	70.4	-0.7	101	5+	46	22	7		2.84	+ .84	.89	20				12	3	
WILDROSE									2.18	+ .20	.74	20				8	3	
WILLISTON WB CITY	69.3	+0.4	97	6	49	22+	6		4.37	+2.48	1.28	20				10	5	1
DIVISION	68.5	-1.5	103	6	36	17	6		3.98	+1.90	4.34	14				11	5	1
STATE	69.3	+0.3	108	8	34	27	6		4.04	+1.60	4.34	14				10	5	1

SEE REFERENCE NOTES FOLLOWING STATION INDEX

NORTH DAKOTA
JULY 1948

TABLE 3
DAILY PRECIPITATION

STATION	DAY OF MONTH																															TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
ALMONT 7 SW				.15					.02		.25	.05	.06	.15	.05	.05				.69	.03	.02		.07	.02							1.61	
ALPHA 1 S	.05			.31			T		.28	.08	.15	1.14		1.20	T	.02				1.00	.08		.06	.07	T							4.37	
AMIDON		.01	.03	.55					.15	.02	.05	.30		1.03	.58	.03			.02	.61	.49	.01		.02	T				.25			4.18	
ARVILLA STATE PARK				1.09					.06						.20	.06	.03			.52	.74	.02		.66					.51	.05		3.94	
ASHLEY	T	1.10												.55	.15			.05		1.00					.80							3.85	
BALDRILL			.05			.23		.02	T			.25		.02	.33	.05			.13	T	1.25	.07	T			.01			.48			2.87	
BELCOURT INDIAN RES												.01	.01	.45	.79	.40	.02			.68	1.10				.12	.03						2.67	
BELFIELD		.10		.57						T	.57	1.08		1.32	.12	T	.05			.47	.20				.06				T			4.54	
BEULAH		.12		.37							.23		.53	.69	.08	.08	T	.31		.28	.16				T			.03				2.88	
8158EE			.08								.12	.07	2.34	1.06	.15	.12				.89	.93				.38		.20	T				6.34	
BISBARCK WB CITY			T	T							.20			.86		.02	T			.17	.58								.02			1.83	
BISMARCK WB AIRPORT		T	T	T							.13	.09		T	.27	.40	T	.01		1.42	T				.01			.02				2.35	
BOTTINEAU				.18				.09					1.88	.38	1.97	.59	.06	T		.06	1.01	.01			.06	.02			T			6.31	
BOTTINEAU STATE PARK				.02				.01					T	.02	.70	2.02	1.02	.12		.22	.85					.10					.05	5.15	
BOWBELLS RR STATION		T		T				.15			.15	.25	.15	1.12			.06	.02		.17	1.50	.07			.20			T	T			3.84	
BOWMAN COURT HOUSE				.87	.57		.14				.02	.36			1.75	.02			T	.17	.10				.02							4.12	
BUTTE 4 W													.47	1.36	.62	.05				.32	.73				.94					.36	T	4.55	
CARRINGTON			T	1.07							.50			.60	.66	.34	.14		T						.42							5.81	
CARSON 2 SW				.08							.90	.14	.04	.50	.37	.05	T		.02	1.93	1.40	.12			.04	.04						4.14	
CASSELTON																																	
CAVALIER POWER PLANT				1.02	.74			.67				T	.03	T	.05	.58		.29	.14		1.45	.41			.60	.01	T		.06	.59	T	6.01	
CENTER				.10						.55				.05			.03		.20	.38				.07								1.96	
COGSWELL							.10					T	.15				.50	.10	1.15	.10	1.00				.80							3.30	
COLGATE RR STATION			.79	.75						.20					.50	.10				1.17	.12				.20				.35			4.18	
COOPERSTOWN				1.15						.45		.88	.10		.35	.06	T			.50	.33				.78				.68	.18		5.42	
COURTENAY		.04	.40								.41		T	.34	.56	.58	.05	T		.61	.30			.31					.31	.03		3.04	
CROSBY				.50		.22		.03			.02	.24	.34	.56		.23		.02		.37	1.16				.18							3.88	
DEVILS LAKE WB CITY		T		.05							T	T	.17		1.10	.01	T			.29	.32			.03	.14	.02		.54		T		2.67	
DICKINSON CAA		.07	.45	.20					.13	.88	T	.32		1.14	.07	T	.15			.34	.01			T				.01				3.77	
DICKINSON EXP STATION		T	.01	.60					.12		.68	.21		T	.81	.13	.05			.22	.23	.03		T	.03			T	.06			3.18	
DRAKE													.18	1.41	1.45	.06	.11			.51	.11				.52							4.35	
DUNN CENTER		.31		.36							.21	.65		1.20	T	.02	.77	.03		.60	.77	.03				.07	.01			.04	.10	5.41	
DUNSEITH ST SANITARIUM				.04							T	T	T	.12	1.92	.44	.08	.75	.37	.03	.71				.07				.03			3.46	
ECKMAN				.03				.40					.18	.10	2.52	.05	.05			.78	.02				.11							4.19	
EDGELEY EXP FARM			.55								.38				1.03					1.04	1.06				.01	.20			T	.03		4.30	
EDMORE 1 W		T		.10				.11			.13		.05	.10	.72	1.45	.05	.05		.44	.81	.02			.60	.05		T	.46			4.32	
ELBOWOODS				.32							.01		.10	.72		.10		.02		.54	.56				.49							2.88	
ELLENDALE NORMAL SCH															.59					.93	1.03				.81	1.13		.02				3.69	
EPPING	.05	.05						.42					.20	.33	.07	1.07	T	.18	.26						.35							3.29	
FAIRFIELD 9 N		.11		.57							.20	.33	.07	1.07	T	T	.18			1.10	.29										.03	3.92	
FARGO WB AIRPORT			T					.03			.20				.07	T	.01			1.52	.07			T	.52	T		1.18	T	T		4.10	
FESSENDEN				.46				T			.04		.71		.50	.21				.77	.20				.08				.38			3.35	
FORMAN											.44		.74		.33					.67	.91	.05			1.10							1.82	
FORT YATES			.10								.20				.75			.07		.07	.13				.50							3.02	
FOXHOLM WILDLIFE REF				.20					.03			.02	.04		.97	.86	T	.10		.30	.24				.20	.06							
FULLERTON			.12															.06		.61	.30				.47							2.06	
GACKLE											.62		.01	.74				.66		1.81	.27				.11			.02	.04			3.87	
GARRISON				.21							T	.02	.11	.23	2.29	.04	.04	T		.71	.20			.02								4.40	
GOLVA				.25							.80	1.15		.05	.32	.03				.80	.10	.33		T								3.83	
GRAFTON STATE SCHOOL			.03	.36							.78				.06	.26				.10	1.64				.73	.06		.28	.10	T			4.40
GRAND FORKS CAA		.89	.74					T			.26				.15	.01	.01			.55	.43			.25	.49	.03	T	.35	T	T		4.16	
GRAND FORKS UNIVERSITY		1.16	.77					.03			.42	.01				.18	.02	.02		.22	.76	T		.25	.64	.04	T	.48	.05			4.80	
GRANVILLE			.03						.15					2.21	.53	.01	.01			.70	.52			.05									

TABLE 3 - Continued

DAILY PRECIPITATION

NORTH DAKOTA
JULY 1948

STATION	DAY OF MONTH																															TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
POWERS LAKE								.22				.02	.45	3.75	2.85	.80	.15				1.60											9.84	
RICHARDTON ABBEY			T	.45			T		.10	T		.56	.15	T	.17	.05	T				1.45			T					.08			3.01	
ROLLA													.02	1.05	.83	.21	.04				.42	.79	T			.21	.03					3.60	
RUGBY 1 S			.01	.62				.07					.13	T	1.88	1.83	.12	.10			.82	.44				.48				.02	T	6.50	
RYDER				.20				.06					.32		3.80	.15		.12			.38	.28	.05			.35						5.71	
SANISH		.03		.15									1.35	.20	1.71	T			.88	.43					.18							4.93	
SELFRIDGE		.10		.35						T	T			T	.80	.10					.40			T					T			1.75	
SHARON			.04	.58					.10			.70		.23	.16						.33	.20	.05			.85			.03	.68	.46		4.43
SHERWOOD			.26			T						.70	.05	2.00	.58	.18				1.25	.44			.15								5.81	
STANLEY				.14					.32				.21	.45	1.29	.44	.08		.04		.60	.10		T								3.67	
STEELE				.55								.31			.93	.04	T	.45		1.69	.32			T	.12			.05	.05			4.51	
TAGUS	.02	.04		.26				.09		.17			.18	1.80	4.34	.09	.02		.20		1.30	.10			.09						.01	8.51	
TIMMER		.18	.03								.90		.06	.19	1.92						.52	.97								T	.03	3.90	
TIOGA		.05											.45		1.00					1.16												2.71	
TOWNER			.18									.42			2.42	.14				*	1.42				.05	.43			.04			5.05	
TROTTERS	T	T	.05						T	.38	.25		1.74	.42	.30	T	T		.70	.40	T				.05			T	.03			4.32	
TURTLE LAKE		.02		.06						T	.02		1.56	.47	.27	.03	T	.02			.55	.15			T	.20						3.35	
TUTTLE S SW				.46							.17				.76	T		T		.20	.26		.02						T	.03		1.90	
UNDERWOOD 11 SW	.01		.48							.06			.01	.64	1.21	.01		.10		.20	.25			.34				T	T	T		3.21	
UPRAN WILDLIFE REFUGE				.05				.15					.64	.82	.83	1.92		.10			.33	.71			.17	.03						5.65	
VALLEY CITY			.14	.12							.25				.75	T	.05			T	1.19			T	.12				.55			3.17	
VAN HOOK				.17			T	.31				.77	.01	1.33	.30	.97				.67	.38			T								4.01	
VELVA			T				T	.10		T	T	T	.53	1.62	.47	.02	.13			.61	.82	T		.01	.85			.01				5.17	
WARPETON STATE SCHOOL											.35			.10	.10		T	.02		1.50	.38	.03		.38				.46	.14			3.36	
WASHEBURN				.04							.31			.37	.47	.08		T		.20	.13				.15				T			1.75	
WATFORD CITY		.20		.17				.15			.02	.12	.06	.46	.06	.07				.89	.56								.08			2.84	
WESTROPE				.08				.05				.59	.68	.35	1.48	.18				.59	.39				.06	.05						4.50	
WILDROSE				.21								.45		.23	.12	.06				.74					.34				.03			2.18	
WILLISTON WB CITY		.12	.69				.02	.45		T	T	.98		.52	T	.11		.01	T	1.28	T			.19				T	T	T		4.37	
WILLOW CITY								T				.04		1.24	1.46	.17	.03			.61	.51			.12					T			4.18	
WILTON RR STATION					.09							.61		.06	.54	T	T		.02	.20	1.08	.03									.06	2.69	
WISHEK		.21									.45				1.15	.15			.03	.03	1.46	.02			.13					.07		3.70	

SEE REFERENCE NOTES FOLLOWING STATION INDEX

NORTH DAKOTA
JULY 1948

TABLE 5
DAILY TEMPERATURES (° FAHRENHEIT)

STATION		DAY OF MONTH																															MEAN
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ALMONT 7 SW	MAX	89	90	90	90	102	100	98	91	89	95	89	85	88	81	77	75	77	83	84	77	66	78	82	78	80	80	85	85	70	80	80	84.3
	MIN	67	62	64	60	67	72	67	64	59	57	64	61	62	61	58	53	52	50	57	61	54	45	52	56	56	54	59	60	53	56	58.6	
AMIDON	MAX	88	89	84	87	94	94	94	100	85	88	84	81	84	81	71	71	75	79	79	76	67	73	86	84	76	77	84	81	73	74	78	81.8
	MIN	54	57	59	58	62	68	65	59	58	55	59	52	56	60	51	50	48	49	54	58	49	42	50	61	43	45	49	58	50	53	46	54.0
ARVILLA STATE PARK	MAX	83	91	88	93	95	102	97	96	92	90	84	80	84	83	77	74	71	79	85	82	61	77	82	89	83	73	79	85	78	75	74	83.3
	MIN	47	52	60	65	60	67	66	73	61	54	64	57	60	60	60	56	59	44	50	51	55	49	48	55	63	57	54	45	58	57	53	56.7
ASHLEY	MAX	85	93	87	98	93	98	95	92	92		80	80	85		84	78	76	76	76	82	75	77	73	78	85	78	78	80	86	78	77	83.3
	MIN	64	63	63	66	72	66	65	63	57		55	63	62		60	53	55	53	55	61	58	50	53	51	61	51	48	56	65	53	49	58.3
BALDHILL	MAX	76	84	94			96	101	99	96	94		93	86	87	84	76	79		82	88	73	74	76	80		84	80	77	86	80	77	84.7
	MIN	52	62	60			60	67	70	62	58		62	60	58	63	53	58		49	58	58	50	45	55		49	49	52	65	53	47	56.7
BELCOURT INDIAN RES	MAX	77	88	80	86	91	87	92	88	83	89	84	77	75	71	73	70	65	73	78	72	62	73	75	82	75	62	70	79	72	71	68	77.0
	MIN	53	60	56	61		66	61	65	47	45	62	52	56	59	57	49	54	39	42	52	50	43	40	54	53	52	51	46	58	53	50	52.9
BELFIELD	MAX	90	90	88	88	96	97	94	84	84	88	85	82	86	75	72	72	75	82	84	78	68	75	86	85	76	77	84	82	79	77	76	82.4
	MIN	55	58	60	57	59	64	65	57	55	50	57	56	56	60	53	50	47	47	54	57	52	41	50	59	48	45	46	54	48	45	42	53.0
BISBEE	MAX	81	91	89	90	94	92	95	91	89	90	92	80	81	72	75	65	68	75	80	65	65	75	77	84	76	65	70	80	71	70	77	79.5
	MIN	54	58	57	58	58	68	62	64	55	51	52	48	50	62	59	54	54	46	52	54	53	45	51	55	54	52	50	51	60	59	54	54.7
BISMARCK WB CITY	MAX		86	91	90	91	100	103	95	89	92	92	84	82	87	82	76	74	75	72	82	72	67	76	80	82	82	82	82	85	70	79	83.3
	MIN	59	62	62	66	65	76	70	75	63	53	64	58	65	65	62	58	55	56	60	65	58	48	54	58	58	52	48	58	58	54	53	59.8
BISMARCK WB AIRPORT	MAX	86	92	90	92	100	104	98	90	91	93	84	82	88	83	77	75	77	78	84	72	66	75	83	80	82	80	83	87	72	80	78	83.9
	MIN	59	65	68	67	65	75	67	69	59	55	64	64	64	63	60	56	56	55	56	61	54	48	52	57	56	52	47	58	58	54	51	59.1
BOTTINEAU	MAX	79	90	89	90	94	92	93	92	87	90	86	80	76	72	73	70	67	76	80	67	65	76	76	82	80	78	76	81	76	72	73	79.9
	MIN	56	65	61	62	56	69	64	64	54	49	63	59	58	62	58	51	55	45	51	55	54	48	51	58	50	52	52	51	51	47	49	55.4
BOTTINEAU STATE PARK	MAX	79	87	83	81	91	90	91	86	81	88	85	79	85	78	73	71	67	73	75	73	71	75	74	75	70	65	71	80	81	70	71	78.0
	MIN	65	66	60	59	65	64	61	65	55	57	61	58	61	64	59	57	55	56	60	59	61	61	59	58	58	53	57	51	53	51	55	58.7
BOWBELLS R R STATION	MAX	94	90	84	92	95	89	86	83	84	91	85	79	73	68	72	67	68	74	80	60	65	75	79	88	73	72	72	80	72	74	70	78.5
	MIN	59	59	53	54	54	65	58	60	53	50	61	50	51	55	55	52	51	44	49	54	50	48	56	59	50	50	51	51	55	50	52	53.4
BOWMAN COURT HOUSE	MAX	89	88	88	86	95	94	94	92	83	88	83	80				69	75	78	79	76	69		85	84	76	76	84	82	73	82	76	82.4
	MIN	55	57	57	58	64	64	68	60	61	58	60	57	57	55	53	50	47	52	56	59	51	43	41	69	47	46	47	59	50	59	52	55.1
BUTTE 4 W	MAX	86							90	89	91	88	85	78	79	73	73	80	76	79	76	61	74	79	86	76	73	75	82	80	74	72	
	MIN	50							62	61	68	71	60	61	61	59	58	56	49	51	57	54	50	49	64	57	58	55	54	58	53	56	
CARRINGTON	MAX	85	82	94	97	99	84	102	92	91	92	87	82	85	79	74	73	75	69	80	63	61	74	78	82	76	79	76	82	69	74	81.9	
	MIN	57	62	68	69	79	76	59	72	70	54	54	54	55	59	60	53	53	50	49	50	55	45	51	55	53	50	51	54	53	52	56.9	
CARSON 2 SW	MAX	90	90	91	91	101	101	98	91	88	93	86	85	88	82	72	72	76	80	80	72	66	74	84	80	79	77	84	80	84	78	78	83.6
	MIN	55	64	63	60	66	69	66	65	57	55	60	60	63	60	57	54	51	54	58	59	50	46	51	57	53	50	46	48	50	51	52	56.4
CASSELTON	MAX																																
	MIN																											77	85	85	77	76	
CAVALIER POWER PLANT	MAX	74	73	81	82	89	90	81	94	91	83	84	85	72	80	91	72	71	71	78	81	70	67	76	80	84	76	73	76	82	75	75	79.3
	MIN	48	45	57	63	61	63	63	69	69	56	64	51	51	61	52	55	55	46	51	50	50	56	50	53	56	56	56	51	66	56	54	55.8
CENTER	MAX	97	90	98	89	100	101	95	86	89	91	86	82	80	81	74	71	74	71	83	71	61	73	81	83	78	77	83	86	69	78	75	82.4
	MIN	36	63	62	67	59	74	65	62	52	50	46	64	60	48	58	53	51	51	52	60	50	43	47	53	51	41	43	50	49	48	48	53.3
COOPERSTOWN	MAX	80	95	93	90	92	98	98	96	90	90	85	78	83	81	78	74	71	76	83	78	64	74	80	85	78	73	72	85	79	74	72	82.1
	MIN	52	59	65	63	64	70	66	71	63	60	63	59	60	59	60	55	58	52	53	56	55	58	49	55	57	53	50	69	57	55	51	58.5

TABLE 5 — Continued
DAILY TEMPERATURE (°FAHRENHEIT)

NORTH DAKOTA
JULY 1948

STATION		DAY OF MONTH																															MEAN
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
FARGO WB AIRPORT	MAX MIN	81 53	91 60	86 67	95 69	97 66	101 74	98 68	93 73	93 68	90 65	75 65	83 59	84 61	81 56	72 59	81 55	74 57	78 53	82 54	76 59	67 55	73 53	81 50	86 62	80 59	78 55	76 54	86 54	78 56	75 56	76 50	82.8 59.5
PESSENDEN	MAX MIN	87 60	89 55	86 66	87 63	91 62	97 66	96 68	92 70	87 60	89 67	87 65	76 60	76 61	80 64	78 61	71 56	69 57	77 52	79 57	76 59	60 56	72 56	78 53	83 58	73 57	74 54	75 49	82 54	80 57	73 54	71 59	80.4 58.8
FORMAN	MAX MIN	89 53	97 61	94 70	95 72	101 69	102 71	99 73	94 75	95 63	94 65	79 66	84 62	85 64	82 57	77 63	82 54	78 58		85 55	85 56	77 61	75 52	79 51	89 57	80 54	79 52	79 52	88 55	81 66			86.6 61.0
FORT YATES	MAX MIN	90 48	94 65	88 92	100 60	103 70	97 72	95 66	91 64	93 59	86 58	85 63	88 60	84 61	78 62	78 58	78 55	80 56	81 54	75 66	71 58	84 50	80 49	85 53	80 57	80 54	82 44	90 60	80 58	80 57	80 50	85.4 58.5	
FOXHOLM WILDLIFE REF	MAX MIN	85 59	88 59	86 63	89 62	92 57	95 58	95 69	88 64	88 68	85 55	91 52	85 55	80 59	77 59	73 55	69 56	75 47	80 50	78 58	62 54	77 49	80 50	87 58	75 54	74 53	77 51	83 54	83 57	74 53	75 41	81.3 56.0	
FULLERTON	MAX MIN	88 52	99 62	88 65	96 66	101 66	104 69	100 67	98 70	98 63	97 61	74 64	82 60	87 64	86 59	78 63	80 66	78 57	79 52	86 54	79 62	71 56	77 52	82 50	87 57	81 62	80 55	81 52	91 55	84 60	77 56	80 51	86.1 59.5
GACKLE	MAX MIN								94 68	90 85	87 63	78 59	81 62	79 61	81 62	74 59	74 50	74 57	74 54	79 56	83 59	76 57	77 48	77 49	82 57	72 55	76 46	77 51	86 56	81 57	74 48	75 52	
GARRISON	MAX MIN	87 59	92 62	90 63	90 62	100 59	99 67	93 62	88 63	90 55	89 52	90 61	88 61	86 61	78 62	76 59	73 54	73 52	76 53	81 54	69 60	60 52	75 44	80 48	84 55	79 55	76 50	80 46	85 55	70 55	76 50	74 51	82.2 56.1
GOLVA	MAX MIN	87 51				102 61	98 66	96 61	86 59	85 55	89 54	89 61	84 56	79 57	84 57		71 54	69 51	73 47	74 51	76 48	68 52	58 49	68 51	86 50	83 49	75 48	77 47	87 52	75 49	68 49	76 52	74 49
GRAFTON STATE SCHOOL	MAX MIN	74 51	87 58	87 64	90 66	92 63	89 68	93 65	93 72	91 64	86 57	84 64	78 56	81 61	81 63	79 62	72 56	72 60	77 41		82 51	64 56	75 49	79 52	83 55	84 61	76 57	76 54	81 50	78 63	75 57	73 53	81.1 58.3
GRAND FORKS CAA	MAX MIN	81 50	90 58	84 63	89 65	94 68	87 65	95 76	96 90	87 65	81 60	81 61	83 83	83 63	70 61	78 56	70 53	76 50	82 54	71 56	62 55	75 52	80 55	86 59	68 58	75 54	84 52	75 59	75 56	73 52		80.7 58.5	
GRAND FORKS UNIVERSITY	MAX MIN	80 50	89 58	82 64	93 65	94 65	88 69	95 67	97 72	92 65	88 61	80 65	80 60	83 60	80 60	73 60	76 56	71 55	77 49	83 54	70 55	62 55	75 52	81 51	86 55	76 60	68 57	76 53	83 53	75 58	75 56		80.9 58.7
GRANVILLE	MAX MIN	81 59	88 64	85 65	88 61	94 57	96 68	89 64	85 68	85 56	87 53	85 68	81 58	84 60	74 60	74 59	72 54	75 50	74 53	78 57	76 53	62 48	74 50	77 58	85 57	75 57		75 50	82 56	81 57	73 51	71 51	80.2 57.3
GRENORA	MAX MIN	95 74	90 62	91 56	92 57	100 64	101 64	94 64	88 62	89 56	90 51	90 60	84 55	78 61	78 61	74 53	71 52	72 53	80 53	82 60	78 52	67 48	74 47	86 52	92 48	77 50	76 46	81 51	89 46	77 52	79 45	74 52	83.5 55.6
HANKINSON RR STATION	MAX MIN	74 52	86 60	93 67	88 69	94 73	98 70	99 67	96 74	91 62	92 69	80 62	84 64	85 58	84 59	73 60	84 53	78 56	77 56	84 57	77 62	84 54	82 54	79 52	74 55	81 63	87 58	80 55	82 53	79 67	89 56	81 55	84.6 60.5
HANNAH	MAX MIN	75 51	88 63	79 56	88 62	91 60	88 64	91 60	88 66	84 65	85 53	84 56	72 62	70 60	75 60	71 60	70 53	70 54	72 53	76 54	72 54	70 52	72 52	76 62	80 56	75 55	71 53	68 56	74 59	71 53	70 44	72 46	77.0 56.5
HANSBORO	MAX MIN	75 53	89 57	81 59	86 62		90 55	91 60		87 54		88 51		76 48	67 57	74 51	67 56	66 44	76 49	80 57	67 52	63 45	75 56	71 52	82 52	72 54	63 51	71 45	78 60	75 51	71 51	76.0 53.1	
HETTINGER	MAX MIN	84 53	90 55	90 54	87 59	95 65	94 67	87 68	85 63	91 62	93 58	81 59	85 54	83 60	71 56	71 55	78 48	79 52	81 58	81 61	70 51	72 44	82 53	85 58	83 48	79 54	80 44	85 61	77 52	74 48	78 48	82.7 55.2	
JAMESTOWN CAA	MAX MIN	82 50	93 64	85 70	91 64	92 70	98 72	95 66	95 68	92 62	92 58	87 64	81 61	83 62	80 59	80 56	75 60	73 53	76 57	83 60	82 54	69 49	77 55	78 49	80 55	79 61	76 55	77 50	85 52	75 56	75 48	82.7 58.6	
JAMESTOWN STATE HOSPITAL	MAX MIN	84 55	97 62	90 67	94 65	97 65	104 73	100 68	98 69	94 65	93 61	88 65	88 63	85 63	83 62	78 57	76 60	72 54	82 61	78 58	68 50	73 49	79 57	82 54	80 57	77 62	77 51	86 52	76 54	76 56	76 52	84.3 59.6	
KENMARE	MAX MIN	80 64	92 66	93 58	87 57	94 70	97 69	91 64	86 64	90 59	89 56		66 54	55 60	57 55	54 54	48 55	55 60	60 53	63 53	68 64	73 64	81 63	88 53	76 53	76 51	80 55	84 57	73 52	78 56	73 52	78 56	58.5
KENSAL WILDLIFE REFUGE	MAX MIN	73 51	92 59	80 62	89 60	92 63	99 70	95 66	91 69	87 61	90 53	71 62	79 60	83 62	79 62	74 59	73 56	72 54	77 58	83 55	80 55	60 46	75 55	77 46	80 56	75 53	75 53	73 59	74 53	68 49	70 48	79.1 57.7	
LA MOURE	MAX MIN	86 55	94 62	90 65	91 65	97 65	100 70	96 71	93 71	95 63	94 59	85 61	85 62	85 60	83 63	80 63	76 51	76 51	77 50	85 53	80 62	75 58	75 52	78 49	85 57	80 61	80 51	79 51	91 56	83 60	77 52	78 52	84.8 58.7
LANGDON EXP FARM	MAX MIN	72 52	88 60	83 65	90 64	92 67	87 71	93 63	93 68	87 57	90 56	87 59	79 65	79 60	78 61	75 59	69 54	69 57	76 54	83 50	73 52	62 46	77 50	79 56	81 56	80 56	69 50	80 56	75 53	75 53	73 50	79.6 55.4	
LARIMORE	MAX MIN	80 50	88 56	85 65	88 66	91 69	90 65	94 71	94 70	89 59	88 66	79 59	79 60	82 61	80 62	71 62	72 56	70 59	74 50	82 56	63 54	60 55	74 50	79 52	84 56	77 62	69 57	73 53	82 50	75 58	74 56	73 55	79.3 58.7
LEEDS	MAX MIN	85 54	93 59	89 59	92 63	96 58	95 58	95 60	92 68	89 54	93 58					74 52	71 54	84 58	85 59	77 52	61 46	78 51	81 52	86 54	78 54	67 51	75 49	84 56	77 53				

NORTH DAKOTA
JULY 1948

TABLE 5—Continued
DAILY TEMPERATURE (°FAHRENHEIT)

STATION		DAY OF MONTH																															MEAN	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
MC CLUSKY	MAX MIN	78 57	87 54	90 66	90 64	95 63	98 70	97 68	99 66	88 57	90 55	92 63	87 61	82 60	83 61	80 59	73 52	71 56	72 52	77 55	80 61	65 54	65 46	76 50				49	74 48	77 52	84 59	66 50	73 52	81.8 57.2
MC HENRY 6 N	MAX MIN	78 53	92 58	84 64	88 62	90 61	102 69	98 65	92 69	89 61	91 56	86 62	79 58	80 60	80 61	73 61	71 54	70 57	74 51	81 54	72 56	59 55	72 47	76 50	83 54	75 59	70 53	71 50	80 51	76 55	72 53	71 48	79.8 56.9	
MC LEOD 3 E	MAX MIN	92 58	95 60	85 60	94 68	97 66	102 69	101 68	108 73	95 63	92 63	86 60	84 58	80 59	86 57	84 60	82 54	78 59	75 49	87 52	78 60	79 62	78 54	80 51	88 58	80 63	79 55	78 50	86 56	82 55	78 58	80 50	86.1 59.2	
MEDORA STATE PARK	MAX MIN			92	88	100	98																											
MEDORA TRNM	MAX MIN																	75 48	80 48	82 55	77 60	70 51	74 43	86 55	85 64	77 47	78 48	84 43	81 62	74 51	78 45	77 46		
MILNOR	MAX MIN	88 50	96 52	92 64	94 68	99 75	102 74	98 80	98 82	96 80	96 60	84 62	88 60	90 64	88 65	75 60	72 54	75 52	77 54	82 49	74 56	75 59	75 50	80 49	87 51	80 50	80 52	85 50	90 49	80 60	82 60	80 55	85.7 59.4	
MINOT CAA	MAX MIN	84 61	91 67	88 64	91 65	98 63	94 71	87 64	86 64	88 61	90 61	89 67	79 60	80 60	73 62	74 59	69 55	68 49	73 55	80 59	63 53	62 48	74 58	80 60	86 56	76 55	75 52	77 51	83 56	71 57	76 50	73 53	79.9 58.4	
MINOT EXP FARM	MAX MIN	86 59	90 64	88 61	90 60	98 59	94 72	88 63	84 62	87 56	91 53	87 62	82 57	81 60	74 58	73 57	70 53	66 54	75 47	79 52	76 57	62 52	75 47	79 51	86 59	75 52	73 51	77 48	83 53	76 54	74 49	73 53	80.4 55.9	
MOHALL	MAX MIN	83 59	92 63	85 58		94 54	91 68	82 63	85 63	85 54	88 48	87 64	75 56	78 60	68 59	73 54	67 52	68 45	76 56	79 45	62 56	66 53	77 48	78 52	85 58	74 52	72 49	76 54	81 55	72 51	73 50	72 47	78.1 54.9	
MOTT RR STATION	MAX MIN	90 53	89 59	87 58	88 56	97 62	97 65	95 64	90 58	85 56	90 61	84 59	81 56	85 56	80 61	76 58	74 57	76 50	80 51	80 55	77 60	70 43	73 51	83 59	80 52	78 51	77 46	83 52	78 60	72 52	76 48	76 51	82.2 55.0	
MUNICH 4 SW	MAX MIN	74 53	90 59	82 59	89 65	92 59	85 68	93 63	90 69	87 54	88 53	86 65	74 61	79 62	75 61	73 55	66 53	67 57	74 46	79 54	70 52	74 47	75 56	86 57	75 52	75 51	68 52	79 49	71 59	74 53	71 50	78.4 56.3		
NAPOLEON 2 SE	MAX MIN	82 57	90 63	86 63	88 59	96 64	100 72	98 71	94 67	87 61	92 63	86 62	77 61	81 62	80 61	75 61	74 55	72 56	74 53	78 56	75 60	66 56	71 49	77 58	84 56	77 52	75 50	76 54	85 56	72 54	74 54	75 51	81.2 58.4	
NEW ENGLAND	MAX MIN	80 52	93 60	91 62	88 60	88 63	96 65	98 66	95 63	86 58	88 55	89 60	85 59	80 58	87 61	70 55	72 52	74 50	77 51	82 57	79 60	76 51	66 45	72 49	84 58	80 55	81 48	79 47	84 52	78 46	80 48	82.1 55.5		
NEW SALEM 1 S	MAX MIN	92 54	94 65	85 62	92 60	103 63	103 71	99 63	90 66	92 65	96 62	86 60	88 59	85 60	82 61	80 61	72 51	76 52	83 53	80 52	72 50	67 51	80 49	81 53	79 54	80 50	81 49	83 52	80 46	71 49	76 51	78 56	84.1 56.1	
OAKES WATER WORKS	MAX MIN	71 56	81 64	97 69	87 69	97 69	101 70	102 93	99 70	93 63	95 63	95 67	77 62	84 66	88 60	86 56	81 55	83 52	80 54	79 59	85 60	79 53	77 48	80 51	98 57	82 53	81 53	82 55	89 65	85 57	80 52	85.9 60.6		
PARK RIVER	MAX MIN	76 49	87 57	84 65	89 65	91 63	83 64	93 65	92 72	91 62	86 58	83 54	77 56	82 61	81 62	77 59	71 60	69 48	76 54	83 57	79 54	62 57	75 49	79 56	83 54	80 52	73 55	74 52	80 55				80.6 58.1	
PARSHALL	MAX MIN	90 59	87 70	90 58	89 58	100 66	95 63	90 61	83 62	85 52	89 57	86 58	80 59	82 59	73 62	74 57	70 52	78 50	80 51	75 59	62 54	75 42	80 50	84 57	75 51	75 45	80 41	84 55	74 50	77 48	75 48	80.9 54.7		
PEMBINA CAA	MAX MIN	71 54	87 57	82 63	87 65	89 66	80 67	93 66	90 70	85 64	85 60	83 53	76 61	80 64	80 60	72 56	69 53	68 48	75 53	80 55	70 55	62 52	75 55	81 58	83 60	75 56	67 58	74 55	80 59	73 57	72 54	70 54	77.9 58.5	
PETERSBURG	MAX MIN	79 52	88 58	84 65	86 63	90 65	87 67	90 72	93 66	80 62	87 58	84 65	76 60	86 58	74 60	70 55	74 58	67 59	79 56	74 55	72 55	79 53	83 55	76 58	80 55	70 51	73 57	80 50	71 52	70 50	78.7 58.2			
PETTIBONE	MAX MIN	91 51	95 57	92 51	92 61	100 62	104 66	103 61	93 63	92 61	95 54	85 61	83 58	82 53	83 59	75 57	74 52	73 53	73 54	83 49	64 59	66 51	74 48	79 51	83 51	79 51	75 54	76 51	85 74	79 51	74 51	72 49	83.0 55.3	
PORTAL	MAX MIN	82 60	95 63	89 54	85 58	90 65	95 63	89 60	84 55	84 52	90 63	88 51	68 53	68 56	74 53	65 54	67 51	71 42	79 66	83 58	60 53	71 49	76 51	81 59	89 49	73 43	78 55	81 53	73 54	76 52	75 54	79.8 54.5		
POWERS LAKE	MAX MIN	92 58	94 62	88 56	90 55	95 60	92 60	84 55	89 50	90 55	87 55	84 52	80 52	73 50	72 58	70 52	74 44	72 50	80 54	76 58	72 54	76 48	78 60	87 59	80 60	80 58	80 56	80 59	77 51	76 52	72 55	81.6 54.7		
RICHARDTON ABBEY	MAX MIN	90 55	89 60	89 60	87 58	96 66	98 68	93 66	85 61	87 60	89 58	86 56	82 59	85 60	74 61	73 55	72 51	72 50	80 52	84 58	78 52	62 45	74 50	83 58	80 55	77 48	76 47	85 52	80 48	69 52	77 45	75 48	81.4 56.0	
ROLLA	MAX MIN	78 55	89 61	78 62	87 62	91 63	85 65	91 62	86 68	82 60	87 59	82 65	70 65	73 56	68 60	72 58	67 51	65 56	72 47	76 51	68 56	61 52	74 49	76 51	81 55	74 55	61 55	69 54	77 50	70 58	72 54	69 54	75.8 56.8	
RUGBY 1 S	MAX MIN	84 57	90 63	86 56	87 63	92 65	95 69	91 65	87 57	85 56	90 52	87 56	79 59	80 59	82 62	75 55	65 54	69 55	74 54	80 55	65 48	63 45	74 52	77 55	85 57	79 56	70 53	74 51	84 54	76 51	74 52	79.7 56.6		
SANISH	MAX MIN	81 48	95 60	90 60	91 57	92 60	103 65	97 65	86 48	86 48	81 50	90 60	88 62	81 62	82 65	73 60	74 55	83 48	80 51	69 56	65 48	75 51	81 52	75 48	76 44	80 53	81 52	75 44	81 53	72 52	77 47	79 47	81.6 53.6	
SILVERDALE	MAX MIN	81 50	87 57	85 68	86 64	90 65	96 66	94 64	89 72	87 63	80 61	79 64	829 5																					

TABLE 5 — Continued
DAILY TEMPERATURE (°FAHRENHEIT)

NORTH DAKOTA
JULY 1948

STATION		DAY OF MONTH																															MEAN
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
VAN HOOK	MAX	95	94	95	95	100	97	87	86	88	88	89	82	84	74	75	72	73	79	79	69	63	75	81	84	77	76	80	82	72	78	75	82.1
	MIN	60	63	60	60	54	65	64	58	54	48	59	58	59	62	57		51	53	53	59	54	44	51	58	51	47	43	56	52	49	51	55.1
VELVA	MAX	83	89	86	89	98	97	93	84	85	89	85	83	77	75	73	71	68	73	78	75	61	72	77	84	75	73	73	82	77	73	72	79.7
	MIN	61	65	63	62	59	75	66	63	55	52	66	60	62	63	60	57	56	51	54	59	55	50	54	61	56	53	51	56	59	53	54	58.3
WAMPETON STATE SCHOOL	MAX	85	91	91	93	96	103	97	94	92	91	89	84	84	82	81	82	78	75	84	82	74	74	79	86	81	79	78	87	86	76	79	84.9
	MIN	53	61	70	68	71	72	68	74	63	66	67	60	65	57	62	56	59	65	56	61	62	62	62	51	60	63	54	56	65	56	51	61.5
WASHBURN	MAX	85	89	88	88	100	102	99	87	89	89	86	85	87	80	76	75	73	81	83	80	66	75	80	82	82	77	80	84	73	76	75	83.0
	MIN														63	64	62	54	55	63	57	57	48	52	59	55	53	50	59	57	52	55	
WATFORD CITY	MAX	94	89	92	91	101	101	91	85	88	88	90	83	86	74	76	75	75	82	84	72	65	76	85	88	79	77	84	81	73	80	79	83.4
	MIN	61	63	57	58	72	69	62	67	64	51	62	61	59	62	55	52	56	54	55	60	56	46	54	63	51	50	47	61	54	47	53	57.4
WESTHOPE	MAX	82	91	85	91	93	92	85	89	88	91	89	80	75	71	76	67	69	77	81	71	66	77	78	84	79	71	80	83	81	85	72	80.6
	MIN	57	64	58	60	56	68	63	65	55	65	62	57	56	62	57	53	53	47	52	54	52	51	54	60	53	52	50	56	51	50	55	56.3
WILLISTON WB CITY	MAX	93	88	90	90	99	97	91	84	85	83	87	83	80	67	75	73	73	78	82	70	66	75	85	89	75	76	82	78	72	78	74	81.2
	MIN	64	61	56	61	56	65	67	62	60	55	64	62	61	61	56	54	52	57	54	58	56	49	58	61	53	49	58	55	50	54	57.4	
WILLOW CITY	MAX	81	92	84	93	93	89	91	92	88	92	89	77	78	74	75	67	72	75	79	69	64	76	77	84	75	70	75	82	75	75	73	79.9
	MIN	58	63	60	61	54	68	62	67	51	49	62	57	56	61	61	55	55	45	50	56	54	46	48	58	55	53	52	51	60	52	55	55.9
WILTON RR STATION	MAX	76	83	86		101	95	99	98	88	89		88	88	87	85	85	85	83	74	73	72	72	71	76	85	78	76	78	82	67	77	82.7
	MIN	54	56	63		61	62	64	62	60	58		60	60	60	56	53	52	53	52	57	54	47	46	51	54	53	46	53	54	49	46	55.0
WISHEK	MAX	79	88	95	89	92	97	100	98	95	92	93	79	79	86	83	76	72	76	77	80	73	68	75	80	85	78	72	80	87	74	75	83.0
	MIN	56	65	63	62	71	72	64	65	61	54	63	59	62	59	60	54	56	48	51	62	57	49	46	56	58	51	48	54	62	53	43	57.4

SEE REFERENCE NOTES FOLLOWING STATION INDEX

NORTH DAKOTA
JULY 1948

TABLE 6
DAILY EVAPORATION (INCHES) AND WIND MOVEMENT (MILES)

STATION		DAY OF MONTH																															TOTAL	DEPART- URE FROM NORMAL
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
DICKINSON EXP STATION	EVAP WIND	.297 155	.203 95	.140 65	.234 105	.140 70	.310 175	.175 50	.201 75	.299 90	.290 70	.230 75	.224 90	.146 40	.225 5	.95 75	.197 100	.211 145	.149 45	.121 35	.244 70	.129 125	.156 90	.60 75	.235 75	.177 95	.299 120	.275 120	.250 110	.255 115	.195 155	.207 110	6.306 2770	
MANDAN EXP STATION	EVAP WIND	.277 122	.117 29	.195 56	.209 59	.194 32	.312 133	.311 61	.269 79	.230 72	.279 39	.193 62	.149 45	.160 63	.152 67	.241 102	.239 98	.232 205	.127 61	.97 32	.212 96	.95 97	.147 123	.116 25	.192 94	.79 119	.294 133	.295 147	.214 91	.156 104	.227 206	.221 127	9.209 2759	

TABLE 7
DAILY RIVER STAGES (FEET)

RIVER AND STATION		FLOOD STAGE	DAY OF MONTH																															HIGHEST (OR CREST)	DATE	LOWEST	DATE
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
MISSOURI WILLISTON L C BRIDGE BISMARCK WATER WORKS		20 19	8.9 11.5	9.7 11.0	9.9 11.0	9.9 10.7	9.0 10.9	9.2 10.5	9.4 10.5	9.4 10.9	9.2 10.9	9.1 10.6	9.2 10.4	9.5 10.2	9.1 10.1	9.1 10.5	9.1 11.1	9.1 11.5	9.6 10.5	9.2 9.9	9.2 1.00	9.3 9.9	9.6 9.9	9.1 10.2	8.2 11.0	7.9 11.4	7.8 10.0	7.8 9.3	7.8 9.0	7.6 9.5	7.6 9.0	7.6 9.8	7.6 8.8	9.50 11.50	12 1	7.6 9.9	29 31

Readings are made at approximately 7 A. M. (local time). They are provisional and subject to correction. Final and corrected stages will be published in the annual publication "Daily River Stages - Principal Rivers of the United States." The following reference notes apply only to Table 7, Daily River Stages:

- | | | | |
|---|-----------------------------|---|--------------|
| a | Obstructed by rough ice | f | Shore ice |
| b | Frozen but open at gage | g | Floating ice |
| c | Upper surface of smooth ice | h | Pool stage |
| d | Ice gorge above gage | i | Dry at gage |
| e | Ice gorge below gage | j | Interpolated |

STATION INDEX

NORTH DAKOTA
JULY 1948

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT.	LONG.	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
ALMONT 7 W	0136	MORTON	HEART	46 43	101 39	2300	MST	7P	7P	6	6		HOGAN RAMSLAND	2 3 5
ALPHA 1 S	0149	GOLDEN VALLEY	LIT MISSOURI	46 37	103 49		MST	7P	7P	23	23		B A BURY	2 3
AMIDON	0209	SLOPE	CANNONBALL	46 29	103 19	2908	MST	5P	5P	27	27		STANLEY W BALE	2 3 5
ARVILLA STATE PARK	0369	GRAND FORKS	RED	47 56	97 30	960	CST	6P	6P	5	5		ALBERT THOREN	2 3 5
ASHLEY	0382	MC INTOSH	MISSOURI	46 02	99 22	2025	CST	7:30A	7:30A	53	53		W C DREY	2 3 5
BALDHILL DAM	0450	BARNES	SHEYENNE	47 02	98 05	1300	CST	8A	8A	1	1		F A JOHNSON	2 3 5
BELCOURT INDIAN RES	0626	ROLETTE	PEMBINA	48 50	99 45	1960	CST	7P	7P	4	4		TURTLE MT INDIAN AG	2 3 5
BELFIELD	0639	STARK	HEART	46 52	103 11	2592	MST	6:30P	6:30P	31	31		CARL INDERGAARD	2 3 5
BEULAH	0766	MERCER	KNIFE	47 16	101 47	1780	MST	7P	7P	34	34		KNIFE RIVER COAL MING	2 3
BISBEE	0796	TOWNER	DEVILS LAKE	48 37	99 22	1601	CST	6P	6P	46	46		ROBERT L PETERSON	2 3 5
BISMARCK WATER WORKS	0809	BURLEIGH	MISSOURI	46 49	100 49	1628	CST	7A	7A	74	74		BISMARCK WATER PLANT	7
BISMARCK WB CITY	0814	BURLEIGH	MISSOURI	46 48	100 48	1670	CST	9:30A	9:30A	9	9		US WEATHER BUREAU	2 3 5
BISMARCK WB AIRPORT	0819	BURLEIGH	MISSOURI	46 46	100 45	1650	CST	MDT	MDT	9	9		US WEATHER BUREAU	2 3 5
BOTTINEAU	0941	BOTTINEAU	SOURIS	48 50	100 27	1638	CST	4P	4P	57	57		N DAK SCH OF FORESTRY	2 3 5
BOTTINEAU STATE PARK	0946	BOTTINEAU	SOURIS	48 56	100 22	2160	CST	6P	6P	5	5		PARK SUPERINTENDENT	2 3 5
BOWBELLS RR STATION	0961	BURKE	SOURIS	48 48	102 15	1958	CST	8A	8A	23	23		CHARLES KAUFMAN	2 3 5
BOWMAN COURT HOUSE	0995	BOWMAN	GRAND	46 11	103 23	2872	MST	4:30P	4:30P	34	34		O B HOOK	2 3 5
BUTTE	1225	MC LEAN	SOURIS	47 50	100 40	1740	CST	6P	6P	24	24		M O ANDERSON	2 3 5
CARRINGTON	1360	FOSTER	JAMES	47 27	99 08	1579	CST	7A	7A	51	51		SOO LINE AGENT	2 3 5
CARSON 2 SW	1370	GRANT	HEART	46 23	101 35	2500	MST	7P	7P	37	37		J W EVENS	2 3 5
CASSELTON	1400	CASS	RED	46 54	97 13	934	CST	5P	5P	53	53		WALLACE G SWEENEY	3 5
CAVALIER POWER PLANT	1435	PEMBINA	PEMBINA	48 48	97 38	894	CST	5P	5P	13	13		CITY LIGHT & POWER	2 3 5
CENTER	1456	OLIVER	MISSOURI	47 07	101 18	2100	MST	7P	7P	11	11		FRED L HEINZ	2 3 5
COGSWELL 6 W	1525	SARGENT	JAMES	46 07	97 55	1291	CST	7A	7A	4	4		JOHN WADSWORTH	2 3
COLGATE	1686	STEELE	RED	47 14	97 39	1180	CST	6P	6P	15	15		O M JENSEN	2 3
COOPERSTOWN	1766	GRIGGS	SHEYENNE	47 26	98 07	1428	CST	5P	5P	52	52		R J LOCKNER	2 3 5
COURTENAY	1816	STUTSMAN	JAMES	47 13	98 34	1523	CST	6P	6P	15	15		G H HANAWANT	2 3
CROSBY	1871	DIVIDE	SOURIS	48 54	103 18	1954	CST	6:30A	6:30A	42	42		VERNON NICBOLS	2 3 5
DEVILS LAKE WB CITY	2158	RAMSEY	DEVILS LAKE	48 07	98 52	1471	CST	MDT	MDT	44	44		US WEATHER BUREAU	2 3 5
DICKINSON CAA	2183	STARK	HEART	46 48	102 48	2187	MST	MDT	MDT	8	8		CAA	2 3 5
DICKINSON EXP STATION	2188	STARK	HEART	46 53	102 48	2460	MST	7A	7A	57	57		LEROY MOOMAW	2 3 5 6
DRAKE	2298	MC HENRY	SOURIS	47 55	100 22	1634	CST	7A	7A	19	19		GEORGE A PAULUS	2 3 5
DUNN CENTER	2365	DUNN	KNIFE	47 21	102 37	2191	MST	6A	6A	50	50		FRANK R SOOMARS	2 3 5
DUNSEITH ST SANITARIUM	2385	ROLETTE	SOURIS	48 50	100 02	2001	CST	5P	5P	53	53		STATE TUBERCULOSIS	2 3 5
ECMAN	2472	BOTTINEAU	SOURIS	48 39	101 03	1500	CST	7A	7A	43	43		E R SHEERMAN	2 3 5
EDGELEY EXP FARM	2482	LA MOURE	JAMES	46 20	98 42	1568	CST	5:30P	5:30P	48	48		N DAK AGRI EXP	2 3 5
EDMORE 1 W	2525	RAMSEY	DEVILS LAKE	48 25	98 29	1524	CST	8P	8P	25	25		MIKE DAVIS	2 3 5
ELBOWOODS	2570	MC LEAN	MISSOURI	47 35	102 09	2082	CST	6P	6P	56	56		B W CASE	2 3 5
ELLENDALE NORMAL SCHOOL	2605	DICKEY	JAMES	46 00	98 31	1457	CST	8P	8P	50	50		J E DEMMER	2 3 5
EPPING	2735	WILLIAMS	MISSOURI	48 18	103 21	2224	CST	6P	6P	40	40		T BEACHLER	2 3 5
FAIRFIELD 9 N	2809	BILLINGS	LIT MISSOURI	47 19	103 12	2650	MST	6P	6P	21	21		MRS EDITH LARSON	2 3
FARGO WB AIRPORT	2859	CASS	RED	46 54	96 48	895	CST	MDT	MDT	68	68		US WEATHER BUREAU	2 3 5
FESSENDEN	2949	WELLS	JAMES	47 39	99 37	1610	CST	6P	6P	37	37		JOHN V ZUBER	2 3 5
FORMAN	3117	SARGENT	RED	46 06	97 38	1249	CST	6P	6P	57	57		ART WATERMAN	2 3 5
FORT YATES	3207	SIoux	MISSOURI	46 05	100 38	1670	MST	6P	6P	49	49		P J JACOBSON	2 3 5
FOXHOLM WILDLIFE REF	3217	WARD	SOURIS	48 27	101 33	1609	CST	5P	5P	24	24		US WILDLIFE REF	2 3 5
FULLERTON	3287	DICKEY	JAMES	46 10	98 25	1439	CST	6P	6P	51	51		F O ALIN	2 3 5
GACKLE	3309	LOGAN	JAMES	46 38	99 08	1951	CST	6P	6P	18	18		DAVID R HAMM	3 5
GARRISON	3376	MC LEAN	MISSOURI	47 38	100 25	1911	CST	MDT	MDT	72	72		MAE H VORACHEK	2 3 5
GOLVA	3556	GOLDEN VALLEY	LIT MISSOURI	46 44	103 59	2781	MST	7P	7P	8	8		CHESTER K PUDA	2 3 5
GRAFTON STATE SCHOOL	3594	WALSB	RED	48 25	97 26	827	CST	5P	5P	57	57		DR J C LAMONT	2 3 5
GRAND FORKS CAA	8616	GRAND FORKS	RED	47 56	97 05	834	CST	MDT	MDT	8	8		CAA	2 3 5
GRAND FORKS UNIVERSITY	3621	GRAND FORKS	RED	47 55	97 05	830	CST	MDT	7P	58	58		UNIVERSITY OF N DAK	2 3 5
GRANVILLE	3686	MC HENRY	SOURIS	48 16	100 51	1504	CST	7P	7P	42	42		FRED ROBLE	2 3 5
GRENORA	3736	WILLIAMS	MISSOURI	48 37	103 56	2114	CST	5P	5P	40	40		L D NIELSON	2 3 5
HALLIDAY	3846	DUNN	KNIFE	47 21	102 20	2073	MST	6P	6P	7	7		JOHN KISSE	2 3
HANKINSON RR STATION	3908	RICHLAND	RED	46 04	96 54	1068	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
HANNAH	3936	CAVALIER	PEMBINA	48 59	98 41	1568	CST	6P	6P	55	55		A E PRIOR	2 3 5
HANSBORO	3963	TOWNER	PEMBINA	48 57	99 23	1597	CST	7P	7P	41	41		W E DISHER	2 3 5
HARVEY WATER WORKS	4013	WELLS	SHEYENNE	47 45	99 53	1596	CST	6P	6P	46	46		H J REYNOLDS	2 3
HETTINGER	4178	ADAMS	GRAND	46 00	102 38	2675	MST	6P	6P	42	42		EDGAR MARTIN	2 3 5
JAMESTOWN CAA	4413	STUTSMAN	JAMES	46 55	98 41	1497	CST	MDT	MDT	8	8		CAA	2 3 5
JAMESTOWN STATE HOSPITAL	4418	STUTSMAN	JAMES	46 53	98 40	1457	CST	7P	7P	57	57		N DAK STATE HOSPITAL	2 3 5
KENMARE	4646	WARD	SOURIS	48 40	102 05	1799	CST	MDT	MDT	17	17		THEO E ECKBERG	2 3 5
KENSAL WILDLIFE REFUGE	4656	STUTSMAN	JAMES	47 15	98 52	1440	CST	7P	7P	8	8		US WILDLIFE REFUGE	2 3 5
LA MOURE	4937	LA MOURE	JAMES	46 21	98 18	1382	CST	7P	7P	2	2		ANDREW REMICK	2 3 5
LANGDON EXP FARM	4958	CAVALIER	PEMBINA	48 45	98 21	1615	CST	5P	5P	53	53		V STURLAUGSON	2 3 5
LARIMORE	5013	GRAND FORKS	RED	47 54	97 38	1134	CST	7P	7P	56	56		JESSE P PHILLIPS	2 3 5
LEEDS	5078	BENSON	DEVILS LAKE	48 17	99 26	1515	CST	6:30P	6:30P	8	8		JOHN PAGAN	2 3 5
LINTON	5210	EMMONS	MISSOURI	46 16	100 14	1711	CST	7:30P	7:30P	32	32		WM HEYERMAN	2 3 5
LISBON	5220	RANSON	SHEYENNE	46 26	97 41	1091	CST	7A	7A	45	45		ROBERT M JODSAAS	2 3 5
MADDOCK AGR SCHOOL	5434	BENSON	SHEYENNE	47 58	99 30	1604	CST	6P	6P	34	34		BENSON CY A & T	2 3 5
MANDAN EXP STATION	5479	MORTON	HEART	46 48	100 54	1750	MST	8A	8A	35	35		NO GT PLAINS FIELD	2 3 5 6
MANDAN FT LINCOLN PARK	5484	MORTON	MISSOURI	46 47	100 52	1700	MST	6P	6P	5	5		ISADORE W SMITH	2 3 5
MARMARTH	5573	SLOPE	LIT MISSOURI	46 18	103 55	2714	MST	6P	6P	36	40		S P GRAND	2 3 5
MAX	5638	MC LEAN	MISSOURI	47 49	101 17	2093	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
MAYVILLE	5660	TRAILL	RED	47 30	97 19	975	CST	6P	6P	53	53		H A RAGAZ	2 3 5
MC CLUSKY	5710	SHERIDAN	MISSOURI	47 29	100 29	1943	CST	11A	11A	24	31		J A HAMILTON	2 3 5
MC HENRY	5730	EDDY	SHEYENNE	47 38	98 35	1509	CST	7:30P	7:30P	26	26		C E BLASKY	2 3 5
MC LEOD 3 E	5754	RICHLAND	SHEYENNE	46 24	97 14	1075	CST	7P	7P	37	37		J G CARLSON	2 3 5
MC VILLE	5764	NELSON	RED	47 46	98 11	1467	CST	6P	6P	5	5		B B KNIEFEL	3
MEDINA 1 W	5798	STUTSMAN	MISSOURI	46 53	99 19	1816	CST	6P	6P	8	8		RUDOLPH GRAF	2 3
MEDORA STATE PARK	5808	BILLINGS	LIT MISSOURI	46 55	103 33	2271	MST	5P	5P	5	34		HARRY ROBERTS	2 3 5
MEDORA TRNMP	5813	BILLINGS	LIT MISSOURI	46 58	103 30	2250	MST	5P	5P	5	5		T ROOSEVELT N PK HDQT	3 5
WILNOR	5933	SARGENT	RED	46 16	97 28	1117	CST	6P	6P	6	6		E W WILSON	2 3 5

NORTH DAKOTA
JULY 1948

STATION INDEX — Continued

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT. O /	LONG. O /	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
MINOT CAA	5988	WARD	SOURIS	48 15	101 17	1724	CST	MDT	MDT	53	53		CAA	2 3 5
MINOT EXP FARM	5993	WARD	SOURIS	48 10	101 18		CST	6P	6P	3	3		N C AGRI EXP STA	2 3 5
MOFFIT RR STATION	6015	BURLEIGH	MISSOURI	46 41	100 18	1760	CST		9A		6		SOO LINE AGENT	2 3
MOHALL	6025	RENVILLE	SOURIS	48 46	101 31	1639	CST	9P	9P	55	55		IVER JOHNSON	2 3 5
MOTT RR STATION	6155	HETTINGER	CANNONBALL	46 22	102 20	2440	MST	6P	6P	42	42		NORTHERN PACIFIC AGENT	2 3 5
MUNICH 4 SW	6195	CAVALIER	DEVILS LAKE	48 38	98 53	1598	CST	7P	7P	1	1		HAROLD FELDNER	2 3 5
NAPOLSON 2 SE	6255	LOGAN	MISSOURI	46 28	99 43	1955	CST	6:30P	6:30P	57	57		GLADYS J PETERSON	2 3 5
NEW ENGLAND	6315	HETTINGER	CANNONBALL	46 33	102 52	2621	MST	8A	8A	57	57		ALFRED HASEL	2 3 5
NEW SALEM 1 S	6365	MORTON	HEART	46 50	101 25	2163	MST	6P	6P	45	45		WM F GAEBE	2 3 5
OAKES WATER WORKS	6620	DICKEY	JAMES	46 08	98 05	1318	CST	7:30A	7:30A	20	20		C M HAGEN	2 3 5
PARK RIVER	6857	WALSH	RED	48 23	97 45	998	CST	5P	5P	45	45		MARTIN SEVERSON	2 3 5
PARSHALL	6867	MOUNTRAIL	MISSOURI	47 57	102 08	1929	CST	6P	6P	17	34		C E SHUBERT	2 3 5
PEMBINA CAA	6947	PEMBINA	RED	48 57	97 15	792	CST	MDT	MDT	75	75		CAA	2 3 5
PETERSBURG	7027	NELSON	RED	48 01	98 00	1524	CST	7P	7P	5	18		F C OVERLAND	2 3 5
PETTIBONE	7047	KIDDER	MISSOURI	47 07	99 31	1856	CST	7P	7P	40	40		L H DETHLOFF	2 3 5
PORTAL	7201	BURKE	SOURIS	49 00	102 33	1954	CST	9A	9A	35	35		US CUSTOMS SERVICE	2 3 5
POWERS LAKE	7231	BURKE	MISSOURI	46 34	102 39	2205	CST	5P	5P	23	44		E J LEWIS	2 3 5
RICHARDTON ABBEY	7530	STARK	HEART	46 53	102 19	2467	MST	7P	7P	33	33		ASSUMPTION ABBEY	2 3 5
ROLLA	7664	ROLETTE	PEMBINA	48 52	99 37	1860	CST	7P	7P	11	11		THEO B FAGERLUND	2 3 5
RUGBY 1 N	7704	PIERCE	SOURIS	48 23	100 00	1542	CST		8:30P	1	20		BOYD C HAWK	2 3 5
RYDER	7749	WARD	MISSOURI	47 55	101 40	2108	CST		9A		20		S C SCHELLENBAUM	2 3
SANISH	7834	MOUNTRAIL	MISSOURI	47 57	102 32	1835	CST	7A	7A	23	23		H J BUGGE	2 3 5
SELFRIDGE	7952	SIOUX	MISSOURI	46 02	100 56	2183	MST		7P		12		J B SMITH	2 3
SHARON	7986	STEELE	RED	47 36	97 54	1516	CST	7:30P	7:30P	22	25		HUGH LYON	2 3 5
SHERWOOD	8047	RENVILLE	SOURIS	49 00	101 38	1647	CST		8:30A	1	1		US CUSTOM & IMM SERV	2 3
STANLEY	8276	MOUNTRAIL	MISSOURI	48 19	102 24	2258	CST	7P	7P	11	11		LEROY EDWARDS	2 3 5
STERLE	8366	KIDDER	MISSOURI	46 51	99 55	1857	CST	7:30P	7:30P	55	55		LEAN V LESHAR	2 3 5
TAGUS	8627	MOUNTRAIL	MISSOURI	48 20	101 56	2179	CST		6P		20		GEORGE N PILGARD	2 3
TIMMER	8727	MORTON	CANNONBALL	46 22	101 00	1742	MST		8A		11		JENNIE GIFFORD	2 3
TIOGA	8737	WILLIAMS	MISSOURI	48 24	102 56	2279	CST		6P		20		L A SIMON	2 3
TOWNER	8792	MC HENRY	SOURIS	48 21	100 24	1482	CST	6:30P	6:30P	47	47		AUGUST B RIEDER	2 3 5
TROTTERS	8807	GOLDEN VALLEY	YELLOWSTONE	47 20	103 54	2419	MST		5P		23		WALTER GRUNEWALD	2 3
TURTLE LAKE	8840	MC LEAN	MISSOURI	47 31	100 53	1899	CST	8P	8P	35	35		A S HAAS	2 3 5
TUTTLE 8 SW	8850	KIDDER	MISSOURI	47 02	100 04	1936	CST		8P		40		ADAM LENO	2 3
UNDERWOOD 11 SW	8877	MC LEAN	MISSOURI	47 25	101 22	1750	CST	6P	6P	24	37		H S SOLENBERGER	2 3 5
UPHAM WILDLIFE REFUGE	8913	MC HENRY	SOURIS	48 37	100 44	1425	CST	5P	5P	8	8		US WILDLIFE REFUGE	2 3 5
VALLEY CITY	8937	BARNES	SHEYENNE	46 55	98 00	1229	CST	6P	6P	44	44		MISS I C ROBERTSON	2 3 5
VAN HOOK	8970	MOUNTRAIL	MISSOURI	47 57	102 21	1864	CST	8:30P	8:30P	8	8		H GLENN SIMS	2 3 5
VELVA	8990	MC HENRY	SOURIS	48 03	100 55	1511	CST	6P	6P	22	22		OSCAR ANDERSON	2 3 5
WAHPETON STATE SCHOOL	9100	RICHLAND	RED	46 16	96 36	962	CST	5P	5P	57	57		STATE SCH OF SCIENCE	2 3 5
WASEBURN	9195	MC LEAN	MISSOURI	47 17	101 02	1731	CST	6P	6P	46	46		FRED F JEFFERIS	2 3 5
WATFORD CITY	9233	MC KENZIE	MISSOURI	47 48	103 17	2084	CST	8P	8P	36	36		J C ZELLER	2 3 5
WESTHOPE	9333	BOTTINEAU	SOURIS	48 55	101 01	1508	CST	6P	6P	43	43		REV R CAREY	2 3 5
WILDROSE	9400	WILLIAMS	MISSOURI	48 38	103 10	2258	CST		6P		19		JONATHAN WINKJER	2 3
WILLISTON L C BRIDGE	9420	WILLIAMS	MISSOURI	48 07	103 44		CST		6:30A					
WILLISTON WB CITY	9425	WILLIAMS	MISSOURI	48 09	103 35	1877	CST	MDT	MDT	70	70		US WEATHER BUREAU	2 3 5
WILLOW CITY	9445	BOTTINEAU	SOURIS	48 36	100 17	1471	CST	8P	8P	57	57		O M SANDERSON	2 3 5
WILTON RR STATION	9455	MC LEAN	MISSOURI	47 09	100 48	2159	CST	7:30A	7:30A	14	14		SOO LINE AGENT	2 3 5
WISHEK	9515	MC INTOSH	MISSOURI	46 16	99 34	2010	CST	8A	8A	28	28		H M LARSON	2 3 5

The four digit identification numbers in the index number column of the Station Index are assigned on a State basis. There will be no duplication of numbers within a state.

Delayed data and corrections will be carried only in the June and December issues of this bulletin.

Data in Tables 3, 5 and 6 are for the 24 hours ending at time of observation. See the Station Index for observation time.

- No record.
+ And also on later dates.
* Amount included in following measurement, time distribution unknown.
6 Precipitation measured at 6-hourly intervals, no recording gage.
k Total includes snow which accumulated in collar of the gage during previous period, and fell into gage for this measurement.
m One or more days of record missing. See Table 5 for detailed daily record.
r Station equipped with recording gage only. All amounts in Table 3 are for the non-recording gages, except for stations with this reference.
T Trace, an amount too small to measure.
z Hourly amounts from recording gage at the same site may be found in Table 4.

Figures and letters following a station name indicate the distance in miles and direction from the post office of the same name.

551.05
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CHARLES SAWYER, Secretary
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CLIMATOLOGICAL DATA

NORTH DAKOTA

AUGUST 1948

Volume LVII No. 8



NAT:
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CHICAGO: 1948

ACKNOWLEDGMENTS

In addition to the climatological data from some 6,000 Weather Bureau and cooperative weather stations, this bulletin series contains records from Hydroclimatic Network Stations which were formerly reproduced in the Hydrologic Bulletin Series. The Hydroclimatic Network is a nationwide net of rain gages -- mostly of the recording type which produce continuous records of precipitation. It was established in 1939 at the request of the Corps of Engineers, Department of the Army, to supplement existing precipitation stations in order to provide records of rainfall intensity which were essential to the planning of flood control and related works by the Corps of Engineers. This Network, now numbering about 2,000 recording, and 1,000 non-recording rain gages, has been maintained by the Weather Bureau through working funds transferred annually to the Weather Bureau by the Corps of Engineers. These transfers averaged about \$250,000 per year between 1940 and 1944, and nearly \$375,000 since that date. For the years 1940-42, the Department of Agriculture transferred about \$100,000 per year to provide data required in its work, and since 1947 the Bureau of Reclamation has transferred about \$25,000 per year to meet the increasing needs of their program in the Western States.

Previous to the introduction of this bulletin series, data from Hydroclimatic Network stations were presented in bulletins (Hydrologic Bulletins) which were issued monthly for each of 8 drainage areas embracing the entire United States, but since the Network was established to meet the internal requirements of the Federal agencies referred to above, no provision was made for public dissemination of the data, distribution being limited to cooperating agencies and to certain public repositories. A list of locations where reference copies of the Hydrologic Bulletin Series are available for inspection may be obtained upon application to Chief, U.S. Weather Bureau, Washington 25, D.C.

Many other records published in this bulletin have been made available through the cooperation of various public offices, private agencies, and individuals as listed in the Station Index.

NORTH DAKOTA - AUGUST, 1948

F. J. BAVENDICK, SECTION DIRECTOR - BISMARCK

GENERAL SUMMARY

August was a warm, dry month with sunshine normal over the east and 10% above the normal over the west portion. The first ten days were cool, but after the 10th, temperatures averaged above normal on all days in all sections of the state. Readings of 100° or higher occurred at many stations in the central and southern parts of the state on the 23rd and 24th. More than the average number of days with 90° or more occurred. The temperature in the eastern division averaged higher than in the western and central divisions, but all divisions reported lower temperatures than in August, 1947.

The rainfall was below normal in the eastern and western divisions and slightly above normal in the middle division. The precipitation was unusually light after the middle of the month. Only a few stations, mostly in Grand Forks County, reported above normal precipitation for August and this was due to heavy showers on August 13th and 14th. From one to more than two and one-half inches of precipitation occurred during these downpours. These rains, following by a wet spring and summer, flooded fields in the northeastern part of the state and caused damage to some standing crops, especially potatoes and sugar beets. All divisions had considerably less precipitation than in August, 1947.

The weather was favorable for all crops. By the close of the month, rye oats and spring wheat were maturing with combining and the harvest of these crops well along over the southwest portion, and beginning generally over the central counties. Flax in all areas had a good stand and color with the early crop about to be harvested.

Corn made excellent growth with sufficient moisture and heat to insure maturing this crop, which is mostly a feed crop in this state. Early potatoes were being dug and the late potato crop in the Red River Valley looks excellent but may not be as large as the 1947 crop. Sugar beets, another crop of the Red River Valley, is excellent. Early reports of threshing of small grains indicated yields as good or slightly better than the excellent crop harvested in 1947.

High winds caused considerable damage to crops and buildings mostly in the northwestern and north-central parts of the state from the 16th to the 20th. Less than the average number of thunderstorms occurred. The storms were not severe and hail losses were below average.

TEMPERATURE

The mean temperature for the state was 68.6°, or 2.0° above the 1892-1948 average for August. The mean temperature for the eastern division was 69.0°; for the middle division, 68.3°; and for the western division, 68.8°. The highest mean temperature was 72.3° at Almont and Forman and the lowest, 64.1° at Belcourt, making a range in mean temperature of 8.2°. The absolute range was 68°, from 103° at Carson on the 19th and Medora State Park on the 30th, to 35° at Belcourt on the 2d. The average daily deficiency in temperature for the state since January 1, 1948, is 0.6°.

PRECIPITATION

The average precipitation for the state was 1.83 inches, or 0.25 inch less than the 1892-1948 average for August. In the eastern division the average amount was 1.76 inches; in the middle division, 2.08 inches; and in the western division, 1.57 inches. The greatest monthly amount reported was 5.05 inches at Foxholm; the least was 0.27 inch at Wildrose. The greatest amount recorded in any 24 consecutive hours was 2.93 inches at Mohall on the 9th. The accumulated excess in precipitation for the state since January 1, 1948 is 0.90 inch.

NORTH DAKOTA
AUGUST 1948

TABLE 1
COMPARATIVE DATA

YEAR	TEMPERATURE			PRECIPITATION						Days, 01 or more									
	MEAN	HIGHEST	LOWEST	AVERAGE	DIVISION			AVERAGE SNOWFALL											
					EASTERN	CENTRAL	WESTERN												
1892	67.3	105	24	2.39	2.86	2.80	1.50	0	8	1920	68.8	108	28	1.53	1.03	2.01	1.55	0	5
1893	66.7	109	29	1.31	2.10	1.25	0.58	0	3	1921	67.2	108	31	1.98	3.08	1.86	0.99	0	6
1894	68.8	102	30	1.14	1.37	0.86	1.20	0	4	1922	69.8	115	33	1.31	1.29	1.63	1.02	0	6
1895	64.5	104	24	1.57	1.87	1.36	1.48	0	5	1923	63.0	97	28	1.84	2.38	1.70	1.45	0	8
1896	64.7	107	21	1.12	2.07	0.86	0.42	0	5	1924	63.8	102	28	1.57	2.27	1.36	1.09	0	6
1897	64.1	106	29	1.18	1.28	1.13	1.13	0	5	1925	67.9	110	29	1.04	1.39	1.06	0.66	0	5
1898	65.4	104	24	1.69	2.92	1.40	0.75	0	5	1926	65.6	105	36	2.37	3.01	2.41	1.68	0	7
1899	65.2	97	32	2.83	2.90	2.90	2.69	0	6	1927	63.4	96	28	3.13	3.17	3.63	2.58	0	8
1900	70.4	114	33	5.06	6.05	4.53	4.60	0	10	1928	64.8	105	25	3.09	3.84	3.15	2.28	0	8
1901	66.9	100	32	1.77	2.55	1.90	0.86	0	6	1929	68.5	106	26	0.77	0.87	0.83	0.60	0	4
1902	64.3	96	26	2.30	2.65	2.36	1.88	0	8	1930	70.4	104	32	1.45	1.40	1.45	1.49	0	6
1903	63.7	103	35	4.68	4.72	4.65	4.67	0	10	1931	67.0	105	30	2.09	2.43	2.33	1.51	0	6
1904	63.3	102	31	1.61	1.56	1.92	1.34	0	6	1932	68.3	100	28	1.89	2.40	1.37	1.89	0	7
1905	67.5	107	34	2.43	3.51	2.44	1.34	0	7	1933	68.5	104	31	0.75	0.81	0.64	0.79	0	5
1906	66.3	105	31	1.84	1.53	1.74	2.25	0	7	1934	67.4	108	25	1.15	1.70	1.15	0.60	0	5
1907	64.5	104	26	1.73	2.17	1.23	1.79	0	6	1935	66.2	109	26	2.35	3.83	1.90	1.32	0	8
1908	63.2	104	25	2.16	2.48	2.46	1.55	0	7	1936	69.8	110	29	1.40	1.67	1.37	1.16	0	6
1909	69.8	109	27	2.23	2.98	1.94	1.78	0	6	1937	72.9	109	40	1.52	2.56	1.11	0.88	0	5
1910	63.1	109	24	1.46	1.58	1.30	1.51	0	5	1938	69.8	109	33	1.50	1.79	1.22	1.48	0	6
1911	62.2	98	23	3.21	3.61	3.87	2.15	0	8	1939	68.6	105	32	2.10	1.94	2.37	1.98	0	7
1912	63.4	118	32	2.88	3.41	2.60	2.62	0	10	1940	67.8	103	33	2.05	3.12	1.77	1.25	0	7
1913	68.9	106	30	2.63	3.15	2.32	2.42	0	6	1941	68.8	111	32	2.86	3.44	2.63	2.52	0	10
1914	64.2	101	26	2.29	2.00	2.26	2.61	0	7	1942	66.3	105	33	3.09	4.69	2.48	2.10	0	9
1915	64.4	100	19	1.18	1.16	1.49	0.89	0	4	1943	67.7	104	31	2.61	2.60	2.52	2.71	0	9
1916	66.0	100	26	2.67	3.17	2.79	2.05	0	8	1944	65.6	102	34	4.37	7.06	3.64	2.42	0	11
1917	65.2	105	25	0.82	0.96	0.74	0.76	0	4	1945	67.1	105	32	1.68	1.84	2.10	1.68	0	6
1918	66.5	102	34	3.38	3.51	3.39	3.25	0	8	1946	65.2	104	29	1.62	1.93	1.70	1.23	0	7
1919	67.9	101	30	1.59	2.58	1.57	0.63	0	5	1947	70.9	110	34	2.67	2.37	2.62	3.02	0	9
										1948	68.6	103	35	1.76	2.08	1.57	1.83	0	6
										PERIOD	66.6	118	19	2.53	2.04	1.68	2.08	0	7

PRESSURE, WIND, HUMIDITY, SUNSHINE, DEGREE DAYS

STATIONS	SEA LEVEL PRESSURE EXTREMES — INCHES				WIND				RELATIVE HUMIDITY AVERAGES				SUN- SHINE	DEGREE DAYS 65° BASE
	HIGHEST	DATE	LOWEST	DATE	AVERAGE SPEED M.P.H.	MAXIMUM SPEED M.P.H.	DIRECTION	DATE	1:30A EST	7:30A EST	1:30P EST	7:30PEST	PERCENT OF POSSIBLE	
BISMARCK AIRPORT	30.38	4	29.41	19	9.7	33	NW	13	79	86	46	47	68	22
DEVILS LAKE	30.41	4	29.49	20	7.2	26	NE	13	77	86	52	47	78	34
FARGO AIRPORT	30.37	4	29.50	24	10.4	44	N	16	81	88	54	52	62	16
WILLISTON	30.30	4	29.42	19	6.8	25	NE	22	65	77	45	38	87	12

TABLE 2
CLIMATOLOGICAL DATA

NORTH DAKOTA

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STATION	TEMPERATURE, IN DEGREES FAHRENHEIT								PRECIPITATION, IN INCHES									
	MEAN	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	NO. OF DAYS		TOTAL	DEPARTURE FROM NORMAL	GREATEST DAY	DATE	SNOWFALL (UNMELTED)			NO. OF DAYS		
							MAX. 90° OR ABOVE	MIN. 32° OR BELOW					TOTAL	GREATEST DEPTH ON GROUND	DATE	.01 INCH OR MORE	.25 INCH OR MORE	1.00 INCH OR MORE
EASTERN DIVISION																		
ADAMS 7 S									1.72		.91	14					3	3
ARVILLA STATE PARK	68.8		97	23	42	5	8		.97		.18	17				10		
BALDHILL	68.8m		100	24+	39	2	7				.88	10				9	5	
CARRINGTON	66.9	-0.2	96	23	43	1+	5		1.95	- .12	.35	12				9	2	
CASSELTON	71.3	4.2	99	24	48	2	7		2.06	- .48	.53	29				7	4	
CAVALIER POWER PLANT	69.3	3.4	94	30	48	4	8		.86	-1.65	.31	13				5	2	
COGSWELL									.80		.40	3				4	1	
COLGATE RR STATION									2.64	.16	1.17	9				6	4	1
COOPERSTOWN	69.2	1.8	98	23	45	1	7		1.25	-1.36	.56	9				4	2	
COURTENAY									2.08	- .32	.55	11				6	4	
DEVILS LAKE WB CITY	68.4	3.6	94	19	46	1	5		.63	-1.85	.21	9				7		
EDMORE 1 W	66.9	2.1	90	20+	42	1	3		1.90	- .43	.48	14				8	4	
ELLEDALE NORMAL SCHOOL	69.8	1.1	98	23	47	1	6		1.80	- .97	.54	3				8	3	
FARGO WB AIRPORT	70.0	3.9	100	24	47	1	4		.79	-2.10	.25	29				9	1	
FORMAN	72.3m	4.1	100	24			12		1.62	-1.13	.80	17				5	2	
FULLERTON	71.0	3.0	102	23	44	1	12		1.68	- .86	.90	3				6	2	
GACKLE	68.9	1.4	95	23	45	1	4		.94	-1.41	.32	6				9	2	
GRAFTON STATE SCHOOL	69.1m	2.9	96	24	47	4	7		.73	-1.79	.19	13				8		
GRAND FORKS CAA	69.0	3.0	95	23+	45	4	5		4.51	1.89	2.56	14				10	3	1
GRAND FORKS UNIVERSITY	69.2	3.2	94	23+	45	4	3		4.17	1.55	2.13	14				10	3	1
HANKINSON RR STATION	70.0	-0.7	99	24	48	1	5		1.95	- .80	.90	14				8	2	
HANNAFORD									1.32							8	2	
HANNAH	65.8m	1.7	88	30+	42	3			2.10	- .27	.95	13				5	2	
HILLSBORO	69.2	1.0	100	24	46	5+	7		1.12	-1.63	.32	17				6	2	
JAMESTOWN CAA	68.8	1.9	96	23	42	4	7		1.81	- .74	.76	12				7	4	
JAMESTOWN STATE HOSPITAL	70.0	3.1	99	23	46	1	8		2.15	- .40	.58	9				8	4	
KENSAL WILDLIFE REFUGE	65.6		95	23	43	1	2		3.05		1.43	13				7	5	1
LA MOURE	71.1		100	23	47	2+	11		1.62		.60	17				8	2	
LANGDON EXP FARM	66.8	3.1	93	30	40	1	2		1.31	-1.16	.47	13				10	1	
LARIMORE	69.3	3.4	95	23+	47	1	8		1.93	- .78	.36	20				9	3	
LISBON	67.7	-0.1	97	24+	42	1	4		1.73	-1.17	.81	17				12	2	
MAYVILLE	70.1	2.2	100	24	47	4	9		1.87	- .68	1.45	9				5	1	1
MC HENRY 6 N	67.0	1.3	94	23	43	8	5		1.76	- .56	.57	29				7	3	
MC LEOD 3 E	70.8	2.3	99	24	45	1	7		2.26	- .44	1.06	14				9	3	1
MC VILLE									2.10		.80	10				6	2	
MILNOR	69.3		100	24	42	6	8		2.83	.10	.71	17					4	
MONTPELIER									1.50		.76	17				9	2	
MUNICH 4 SW	66.0		90	30	41	1	1		3.01		1.20	10				7	4	1
OAKES WATER WORKS	71.4	2.3	102	25	46	1	12		.45	-2.22	.27	7				8	1	
PARK RIVER	68.3	1.7	93	24+	40	1+	6		1.36	- .94	.45	14				6	3	
PEMBINA CAA	67.9	3.2	90	30+	47	2+	2		1.01	-1.28	.35	27				11	1	
PETERSBURG	67.5		90	24	44	1	1		2.27	- .09	1.19	13				6	3	1
SARLES 3 E									3.18		1.03	9				9	3	1
SHARON	68.1	0.2	95	23	45	1	6		1.55	- .82	.45	9				5	4	
VALLEY CITY	70.1	2.4	99	23	45	1	9		1.73	- .81	.41	28				7	4	
VERONA									1.37		.55	17				6	2	
WAHPETON POWER PLANT									1.43		.40	27				8	3	
WAHPETON STATE SCHOOL	71.3	2.6	98	24	45	1	7		1.35	-1.52	.43	27				7	2	
WALHALLA									.46		.34	13				4	1	
DIVISION	69.0	2.2	102	23+	39	2	6		1.76	- .77	2.56	14				7	3	1

SEE REFERENCE NOTES FOLLOWING STATION INDEX

NORTH DAKOTA
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TABLE 2 — Continued
CLIMATOLOGICAL DATA

STATION	TEMPERATURE, IN DEGREES FAHRENHEIT								PRECIPITATION, IN INCHES									
	MEAN	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	NO. OF DAYS		TOTAL	DEPARTURE FROM NORMAL	GREATEST DAY	DATE	SNOWFALL (UNMELTED)			NO. OF DAYS		
							MAX. 90° OR ABOVE MIN. 32° OR BELOW						TOTAL	GREATEST DEPTH ON GROUND	DATE	.01 INCH OR MORE	.25 INCH OR MORE	1.00 INCH OR MORE
MIDDLE DIVISION																		
ASHLEY	68.8m	1.6	100	24	42	2	8		.78	-1.66	.20	3				7		
BELCOURT INDIAN RES	64.1m				35	2												
BISBEE	66.9	1.2	91	19+	44	2	2		4.14	1.79	1.03	8				8	5	1
BISMARCK WATER WORKS									1.18		.50	2				6	2	
BISMARCK WB CITY	71.2	3.0	96	16+	46	1	10		.91	-.72	.68	3				7	1	
BISMARCK WB AIRPORT	69.8	-3.1	98	16	43	1	14		1.18	-.64	.50	2				6	2	
BOTTINEAU	67.8	2.9	94	19	42	1	5		1.71	-.74	1.04	6				6	2	1
BOTTINEAU STATE PARK	67.0		93	19	41	1+	1		1.76		.85	6				5	2	
BUTTE 4 W	69.7m	2.5	96	19+	45	3	5		1.98	.04	.93	9				4	3	
CARSON 2 SW	71.2	2.6	103	19	45	1+	17		1.10	-.56	.34	6				7	1	
CENTER	66.5	-1.5	97	19	36	1	7		2.32	.61	.70	5				7	4	
DAWSON									1.62		.40	6				7	3	
DRAKE	69.2	1.6	98	20	45	3	4		1.89	-.13	.76	10				7	3	
DUNSEITH ST SANITARIUM	66.3	1.7	91	23	45	1+	2		2.52	.16	1.67	6				7	2	1
ECKMAN	66.1	1.1	95	20	40	1	3		2.72	.84	1.45	10				6	2	1
FESSENDEN	69.0	2.3	94	19+	46	1+	4		1.66	-.52	.42	12				7	3	
FORT YATES	71.5	1.8	101	16	40	1	14		1.08	-.81	.60	6				4	1	
FOXHOLM WILDLIFE REF	68.2	1.6	95	19	41	4	6		5.05	3.07	2.76	9				6	4	1
GARRISON	68.7	2.1	97	19	41	1	7		1.68	-.26	.56	6				6	3	
GRANO									3.44		1.90	9				8	3	1
GRANVILLE	67.2	1.5	98	23	43	3	3		1.70	-.17	.86	9				6	2	
HANSBORO	65.7	2.2	91	29	40	4	2		3.66	1.34	1.66	9				9	4	1
HAZELTON RR STATION									.78		.36	14				5	2	
HURDSFIELD									1.70		.45	6				6	3	
KRAMER 5 SE									2.51		.83	9				10	3	
LEEDS	69.0		96	19+	41	4	7		1.69		1.05	6				8	1	1
LINTON	71.6	1.5	98	16+	40	1	13		1.86	-.22	.53	6				6	5	
MADDOCK AGR SCHOOL	68.7	2.2	95	19+	44	1+	6		2.51	.20	1.19	6				8	3	1
MANDAN EXP STATION	70.2	1.3	97	20+	44	1	12		1.08	-.50	.42	6				8	1	
MANDAN FT LINCOLN PARK	71.7		98	30	43	1	15		1.30		.60	7				6	1	
MAX	68.3m	0.9	94	31	45	3	6		1.86	-.02	.83	6				4	3	
MC CLUSKY	68.2m	1.0			43	1	5		1.86	-.07	.45	6				7	5	
MEDINA 1 W									2.23		1.05	14				7	4	1
MINOT CAA	68.3	2.7	97	19	43	3	3		2.29	.37	1.68	9				6	2	1
MINOT EXP FARM	67.5		96	19	42	3	3		1.59		.95	9				7	2	
MOFFITT RR STATION									.82		.40	6				5	1	
MOHALL	66.3	1.5	95	19	43	1	2		3.99	2.08	2.93	9				5	3	1
NAPOLEON 2 SE	68.4	1.3	93	23+	46	4	5		1.30	-.90	.50	6				7	2	
NEW SALEM 1 S	70.5	2.6	102	19	45	4	13		1.43	-.30	.50	13				8	1	
PETTIBONE	67.3	-1.2	96	23	42	3	3		2.97	.82	1.09	14				7	5	1
ROLLA	65.6m	0.0	89	30	44	2+			4.37	1.88	1.53	10				12	4	2
RUGBY 1 S	67.6		95	19	42	1	2		3.15	1.15	1.70	6				5	3	1
SELFRIDGE									2.07	.24	.82	22				7	3	
SHERWOOD									1.92		1.56	9				7	1	1
STEELE	68.4	1.1	92	30	43	1	4		1.72	-.46	.74	12				7	2	
TIMMER									1.05	-.76	.51	6				6	2	
TOWNER	67.5	1.3	97	19	42	3	6		2.86	.88	1.34	9				5	3	1
TURTLE LAKE	69.2	1.9	96	19	42	3	6		1.42	-.56	.37	9				7	3	
TUTTLE 8 SW									1.65	-.18	.69	12				9	2	
UNDERWOOD 11 SW	68.4	0.1	98	19	39	1	6		2.42	.51	1.35	6				4	3	1
UPHAM WILDLIFE REFUGE	64.8m		95	19	36	1+	4		2.25		.85	9				6	3	
VELVA	68.1	1.3	95	19	44	3	2		1.36	-.86	.65	6				4	2	
WASHBURN	70.4m	2.3	94	30	45	3	8		2.10	.47	.83	12				5	3	
WESTHOPE	68.9	3.3	94	23	44	1	5		3.11	1.10	1.58	9				5	2	2
WILLOW CITY	67.1	2.9	94	19	42	4	3		3.76	1.72	1.50	6				7	3	

SEE REFERENCE NOTES FOLLOWING STATION INDEX

TABLE 2 — Continued
CLIMATOLOGICAL DATA

NORTH DAKOTA
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STATION	TEMPERATURE, IN DEGREES FAHRENHEIT							PRECIPITATION, IN INCHES									
	MEAN	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	NO. OF DAYS MAX. 90° OR ABOVE MIN. 32° OR BELOW	TOTAL	DEPARTURE FROM NORMAL	GREATEST DAY	DATE	SNOWFALL (UNMELTED)			NO. OF DAYS		
												TOTAL	GREATEST DEPTH ON GROUND	DATE	.01 INCH OR MORE	.25 INCH OR MORE	1.00 INCH OR MORE
WILTON RR STATION	67.3	-0.4	93	20+	45	1	3	1.49	-.22	.97	12				8	1	
WISHEK	67.7 _m	0.7	100	24	37	1	8	1.85	-.34	.93	3				9	2	
DIVISION	68.3	1.4	103	19	35	2	6	2.08	.04	2.93	9				6	2	1
WESTERN DIVISION																	
ALEXANDER RR STATION								1.12		.32	9				6	3	
ALMONT 7 SW	72.3		102	19	46	1	13	1.26		.36	6				10	2	
ALPHA 1 S								1.31	-.30	.41	8				7	2	
AMIDON	69.5	1.1	98	19+	41	3	11	2.79	1.24	1.50	9				6	2	1
BELFIELD	68.6	0.6	99	30	39	3	11	1.93	.12	.80	9				6	3	
BEULAH								1.60	-.23	.49	5				7	3	
BOWBELLS RR STATION	65.5	0.7	95	20	41	1+	4	1.39	-.59	.47	6				8	2	
BOWMAN COURT HOUSE	70.8	2.7	103	30	41	2	16	1.38	-.36	.64	9				6	2	
CROSBY	67.0	2.0	98	21+	40	3	6	.69	-1.13	.24	10				6		
DICKINSON CAA	69.1	2.6	100	19	42	3	9	1.10	-.74	.65	8				5	2	
DICKINSON EXP STATION	68.3	1.8	102	20	38	1	12	1.42	-.42	.79	9				7	2	
DUNN CENTER					38	3		.90	-.76	.42	9				5	1	
ELBOWOODS	68.0 _m	0.1	102	19	39	1	10	1.09	-.75	.45	9				6	2	
EPPING	70.1	2.6	100	18	42	2	7	1.26	-.38	.79	9				5	1	
FAIRFIELD 9 N								.72	-.86	.53	8				2	1	
GLEN ULLIN								1.43		.36	9+				6	3	
GRENORA	70.3	4.7	98	30	44	3	11	.82	-.68	.59	10				2	1	
HALLIDAY								2.02		.67	9				7	4	
HETTINGER	70.0	1.1	100	19	40	1	14	2.10	.56	.74	6				8	3	
KENMARE	68.2	2.2	95	20	43	3	4	2.33	.42	1.00	6				5	3	1
MANNING								2.16		.77	9				6	3	
MARMARTH	69.2	1.0	99	30	44	25	10	2.56	.94	1.55	9				6	2	1
MEDORA STATE PARK			103	30			13										
MEDORA T R N M P	68.4		102	30	36	3	15	1.17		.72	9				5	2	
MOTT RR STATION	69.2	1.2	101	19	41	4	13	1.14	-.62	.40	5				6	2	
NEW ENGLAND	69.2	1.4	100	20	42	4	12	3.20	1.62	2.18	9				6	3	1
PARSHALL	68.6	2.6	100	19	38	3	7	1.63	-.21	1.18	9				3	2	1
PORTAL	66.9 _m	2.1	95	20	42	28	4	1.18	-.78	.60	11				6	2	
POWERS LAKE	67.9	2.1	91	19+	42	1+	2	1.30	-.38	1.20	9				2	1	1
PRETTY ROCK								.80		.37	6				4	1	
RICHARDTON ABBEY	69.7	1.2	98	19	45	1	11	2.37	.53	1.13	8				7	3	1
RYDER								2.10	.03	.75	9				5	3	
SANISH	67.5	-0.1	97	20+	36	2	7	2.07	.47	.86	11				4	3	
STANLEY	66.2		97	19	44	1+	4	1.95	.05	1.04	9				5	2	1
TAGUS								2.88	1.10	1.50	8				6	2	1
TIOGA								2.01	.26	1.76	10				3	1	1
TROTTERS								.57	-.97	.43	9				2	1	
VAN HOOK								2.14		1.50	9				4	3	1
WATFORD CITY	70.5	2.2	100	19	40	3	10	2.17	.57	1.82	9				7	1	1
WILDROSE								.27	-1.54	.15	8				3		
WILLISTON WB CITY	70.3	4.2	98	19	43	3	7	.46	-1.01	.23	9				5		
DIVISION	68.8	1.8	103	30	36	2+	9	1.57	-.11	2.18	9				5	2	1
STATE	68.6	2.0	103	19+	35	2	7	1.83	-.25	2.93	9				6	3	1

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NORTH DAKOTA
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TABLE 3
DAILY PRECIPITATION

STATION	DAY OF MONTH																															TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ADAMS 7 S			.12	T				.02	.31	.32	.33			.91			.48															1.72
ALEXANDER RR STATION														.04	T																	1.12
ALMONT 7 SW		.15	.04		.29	.36	.01	.15	.06					.15	.02						.03											1.25
ALPHA 1 S		.17			.03	.19		.41	.26					.03						.22	.03											1.31
AMIDON					.01		.23	.74	1.50					.09							.22	.22										2.75
ARVILLA STATE PARK										.15	.02			T	.13	.05	.18				.05			.08	.07			.10	.14			.97
ASHLEY Z		.20				.05	.15						.05	.15	.13													.05		.14		.78
BALDHILL				T		.03	.25			.03	.88		.28	T				.38														
BALFOUR RR STATION R									1.24			.38								.19							.01		.17		.47	
BELCOURT INDIAN RES		.02				1.40			.57	.63				.62	.05										.02					.05		.03
BELFIELD					T	T		.15	.80	T		T		.55	.30					.08										.05		1.93
BEULAH					.49	.07		.27	.41		.02			.10							.24											1.60
BISBECK						.80		1.03	.62					.92	.22						.16			.31								4.14
BISMARCK WATER WORKS		.50			.02	.36	T		.23			.06		.01						T												1.18
BISMARCK WB CITY		.68				.02	T		.07	.04		.03		.02							.05		T									T
BISMARCK WB AIRPORT Z		.50			.02	.36	T	T	.23		.06		.01		.07					T			T									1.18
BOTTINFAR		.04			1.04	T			.42	T					.07							.02										1.71
BOTTINFAR STATE PARK					.85				.73	.15											.02											T
BOWBELLS RR STATION					.47	.01			.20	.44		.05	.08								.04											1.76
BOWMAN COURT HOUSE Z					.10		.24	.37	.64				.02							.01	.04											1.35
BUTTE						.64	T	T	.93	T		.34									.07											1.98
CARRINGTON					.20	.22	T		.01	.12		.35																				1.95
CARSON 2 SW	.22				.10	.34	.03		.17					T	.07	.24	.23				.17											1.10
CASSELLTON					.25	T			.51	T		.05		T			.16	.43			T						T		.13	.53		2.06
CAVALIER POWER PLANT									.15	.05			.31	.10		T	T												.25			.86
CFENTER	.05				.70			.18	.12		.50		.37							.40												2.32
COGSWELL 6 W		.40				.10	.20	T									.10															.80
COLGATE R						.16			1.17					.29	.38														.44	.20		2.64
COOPERSTOWN						.13	T		.56			.05																	.51			1.25
COURTENAY			T			.24			.48		.55		.01				.26						T	T						.54		2.08
CROSBY									.23	.24		.07		.10																.04		.69
DAWSON R	.35					.40		.02	.21		.35	.24																				1.62
DEVILS LAKE WB CITY Z									.21	.04				.10						.07	.07											.63
DICKINSON CAA Z	.12			.02	T		T	.65	.27					.04	T																	1.10
DICKINSON EXP STATION		.44			.01	T	T	.79	.09	.02				.06					T		.01											1.42
DRAKE					.51	.02		.12	.76		.37																					1.89
DUNN CENTER		.02			.21	T		.42			.08			.17																		.90
DUNSEITH ST SANITARIUM					1.67	T	T	.49	.13				.09	.04																		2.52
EDMAN					.97	.05		.02	1.45		.09																					2.72
EDMORF 1 W								.07	.40				.26	.48				.14			.21							.09	.25			1.90
ELBOWOODS			.39	.04				.03	.45		T		.06								.12											1.09
ELLENDALE NORMAL SCH		.54				.36	.12		.08			.24		.37																		1.80
ELPPING								.12	.79	.09	.16		.10																			1.26
FAIRFIELD 9 N		T						.53	.19																							.72
FARGO WB AIRPORT Z		T				.03	T		.10			.03		.14	.01	.04	T				.02								.17	.25		T
FARGO WB AIRPORT Z																																
FFSSENOEN						.34			.21			.42					.05				.19											1.66
FORMAN		.11				.24	.32										.80															1.82
FORT YATES	.23				T	.60		T	.05																							1.08
FOXHOLM WILDLIFE REF					.52	T		2.76	.10		.88	T									.58											5.05
FULLERTON	.10	.90			.44			.09			.06				.09	T					T											1.68
GACKLE					.32		.01		.01		.25		.10																			.94
GARRISON Z					.56			.01	.51		.47										.11											1.68
GLEN ULLIN R	.06			.20	.12		.33	.36					.36	.19	.14	.03	.02				.11											1.43
GRAFTON STATE SCHOOL								.07	.05					.19	.14	.03	.02				.13											.73
GRAND FORKS CAA Z		T						.10	.73		T		.13	2.56	.01	.44	.01				.22	T							.16	.15		4.51
GRAND FORKS UNIVERSITY		.22						.15	.57	T	T		.11	2.13	.02			.37		.55									.22	.14		4.17
GRAND R //					.14	.63		1.90		.08		.04	.08	</																		

TABLE 3 — Continued

DAILY PRECIPITATION

NORTH DAKOTA
AUGUST 1948

STATION	DAY OF MONTH																															TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
MONTPELIER			T	T		.12	.12			.10		.28		.02			.76							.04			.02		T	.04			1.50
MOTT RR STATION Z					.40	.10		.18	.30				.04							.12												1.14	
MUNICH 4 SW					.02	T			.41	1.20	T		.83	.36		T				.09			T							.10		3.01	
NAPOLEON 2 SE	.20	.44				.50	.01		.01			.09										.05		T								1.30	
NFW ENGLAND		.14				.26	.03		2.18					.57						.02												3.20	
NFW SALEM 1 S	.03	.05			.21	.22		.07	.11				.50							.24												1.43	
OAKES WATER WORKS R			.01		.03	.27	.01		.03				.34	.45			.04						.04									.45	
PARK RIVER								T	1.18	.03		.19		.02			.44			.04												1.36	
PARSHALL									.05	.11	T		.03	.16	.02	.19	.01							T				.35	T			1.63	
PEMBINA CAA Z	.03	.02																		.04					T							1.01	
PETERSBURG			T						.11	.35			1.19							.20			.36					.06				2.27	
PETTIBONE	.02					.35			.58			.50			1.09		.30											.13				2.97	
PORTAL					.04				.36			.60	.12							.04						T				.02		1.18	
POWERS LAKE	T	T						T	1.20		.10					T																1.30	
PRETTY ROCK		.15				.37	T		.04	.24												T										.80	
RICHARDTON ABBEY	.14	T			.19	.07		1.13	.52				.25	.07																		2.37	
ROLLA	.06	.01				1.09	.01		.91	1.53			.48	.05						.08				.05						.07	.03	4.37	
RUGBY 1 S						1.70			.91	.03										.33												3.15	
RYDER						.30		T	.75	.20		.20	T							.65		T								.18		2.10	
SANISH					.06				.60	.55	.86																					2.07	
SARLES 3 F R //						.10			1.03	.80			.91	.03		.05			.07	.14			.05									3.18	
SELFRIDGE	.32				.52	.18	.10	T	.10		T	T								.03		.82										2.07	
SHARON						T			.45	.02			T		.40					T								.42		.26		1.55	
SHERWOOD	.01				.15				1.56			.03	.08	.03		T														.06		1.92	
STANLEY					.04				1.04	T		.22	.23				T			.42												1.95	
STEFLE	.35	.20					T	T	.24	T	.02	.74				.02						T						.15				1.72	
TAGUS					T		.19	1.50		.04	.93		T		.03		.17				.05		T									2.88	
TIMMER						.51			.30	.03					.03				.10			.08										1.05	
TIOGA								T		1.76			.15	.10																		2.01	
TOWNER						.95			1.34			.14								.29										.14		2.86	
TROTTERS	T				T	T			.43			.14	T																			.57	
TURTLE LAKE	.05				.26	.22	T		.37			.31	T						T	.15												1.42	
TUTTLE 8 SW	.10	.22			.38	.02	T		.12			.69			.05					.02												.06	1.65
UNDERWOOD 11 SW					T	1.35	T		.54	T		.29	T							.24		T										2.42	
UPHAM WILDLIFE REFUGE						.67			.85	.38		.06								.13										.16		2.25	
VALLEY CITY						.26			.28		.32		.12			.23						T			T	T		.11	.41			1.73	
VAN HOOK								.02	1.50		.27									.35												2.14	
VELVA	T				T	.65			.62			.07				T	.55			.02												T	1.36
VERONA		.25					.20		.16	.20		.05		.30	.32	.09	.05			.12												1.37	
WAHPETON POWER PLANT R																						.06										1.43	
WAHPETON STATE SCHOOL	T				T				.02	.12		T		.40		.15	.13			T		.07			T	T		.43		.05		1.35	
WALHALLA						.36	T		.04				.34							.06												.46	
WASHBURN	T						T	T	.61			.83	T	.08						.22												2.10	
WATFORD CITY	.09				.04				1.82		.03	.13	.04							.02												2.17	
WESTHOPE					.18				1.58	1.05										.23										.07		3.11	
WILOROSE	T							.15			T	.08		.04		T																.27	
WILLISTON WB CITY R	.08				T	T		.05	.23	T			.03			T	T											T	T			.46	
WILLOW CITY		.05			.03	1.50			.82	.11			1.11							.14												3.76	
WILTON RR STATION					.12	.03			.03	.23		.97		.02						.07												1.49	
WISHEK		.93			.15		.16	-	.05	.01		.21	T	.31	.01							-		.02			T					1.85	

SEE REFERENCE NOTES FOLLOWING STATION INDEX

NORTH DAKOTA
AUGUST 1948

TABLE 4
HOURLY PRECIPITATION

STATION	A. M. HOUR ENDING												P. M. HOUR ENDING												TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
																										-2d-
ASHLEY	//								.01	.02	.05	.02		.03											.13	
BALFOUR R R STATION		-	-	-	-	-	-	-	-	-	-	-	-												.50	
BISMARCK WB AIRPORT														.27	.07	.07	-	-	-	.04	.02	.03	-	-	.35	
DAWSON																	.15	.05	.03	.07	.05			.13		
DICKINSON CAA																.04	.08	.01						.20		
EDGELEY EXP FARM																.03	.01	.05	.05	.02			.04	.06		
GLEN ULLIN																.03		.01		.02				.08		
WILLISTON WB CITY						.03		.03	.01			.01														
																										-3d-
EDGELEY EXP FARM		.16	.11	.01	.03																				.31	
HAZELTON R R STATION	//								.01																.01	
OAKES WATER WORKS		.06	.04	.05	.08	.06	.02		.02																.33	
																										-5th-
ASHLEY	//																.07	.06	.01	.01		.01	.01	.01	.18	
BISMARCK WB AIRPORT																							.02		.02	
BOWMAN COURT HOUSE	//													.02	.07	.02	.03								.14	
GARRISON																.03		.04	.15	.15	.10	.05	.01		.53	
GLEN ULLIN																		.06	.04	.02	.03				.20	
GRAND	//																						.01	.13		
KRAMER 5 SE																						.02	.03	.01	.04	
MINOT CAA	//													.01	.04	.04	.03	.05	.09	.04	.02	.03	.02	*	.37	
MOTT RR STATION															*	*	*	*	*	*	*	*	*	*		
																										-6th-
ASHLEY	//	.01	.01	.01	.01																				.04	
BALFOUR R R STATION		-	-	-	-	-	-	-	-	-	-	-	-												.36	
BISMARCK WB AIRPORT			.01	.03	.11	.08	.05	.02	.02	.01				.02			.01	-	-	-	-	-	-	-	.02	
BOWMAN COURT HOUSE	//				.04	.13	.18	.02	.01	.02															.40	
DAWSON																									.02	
DICKINSON CAA																		.02							.03	
FARGO WB AIRPORT	//				.01	.03	.01							.03											.12	
GLEN ULLIN		.03	.02	.02	.01	.03	.01																		.63	
GRAND	//	.27	.24	.09	.01	.02																			.09	
RANNAFORD		*	*	*	*	*	*						*	*	*	*	*	*	*	*	*	*	*	*		
HAZELTON R R STATION	//				.03	.06	.04	.07	.04	.01	*	*	*	.02			*	*	*	*	*	*	*	*	.27	
HURDSFIELD		*	*	*	*	*	*	*	*	*	*	*	.45												.45	
JAMESTOWN CAA	//				.01	.07	.18	.02	.01							.02									.31	
KRAMER 5 SE		.03	.05	.04	.09	.01	.05	.24	.10	.12															.73	
MINOT CAA	//		.01	.02																					.03	
MOTT RR STATION		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
OAKES WATER WORKS								.06	.04							.01	.04	.03	.04	.01	.01	.01			.25	
SARLES 3 E	//				.01	.04	.02	.01		.02															.10	
																										-7th-
BOWMAN COURT HOUSE	//	.19	.03																						.22	
DICKINSON CAA			.02																						.02	
HANNAFORD										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	.05	
OAKES WATER WORKS		.02	.03																							
																										-8th
BOWMAN COURT HOUSE	//												.05	.01	.10	.15	.01	.02			.11	.20	.01	.01	.67	
DAWSON																						.01	.01	.02		
DICKINSON CAA		.01	.02		.01	.02		.02	.03				.02	.01	.03	.04	.20	.22	.02		.01	.01	.04	.01	.62	
EDGELEY EXP FARM													.01	.04	.12	.10	.06	.04							.47	
GLEN ULLIN													.02	.11	.03	.07	.08								.33	
MC GREGOR RR STATION									.01				.03	.07							.02				.11	
MOTT RR STATION																									.05	
WILLISTON WB CITY										.05																
																										-9th-
BALFOUR RR STATION						.03	.02	.18	.08	.09	.04	.01				.15	.62		.01	.01					1.24	
BISMARCK WB AIRPORT								.05	.04							.14									.23	
BOWMAN COURT HOUSE	//	.28		.02																					.30	
DAWSON					.01				.01	.01	.05														.21	
DEVILS LAKE WB CITY																									.21	
DICKINSON CAA		.01	*	*	*	*	*	.28								.11	.02	.13	.02		.03	.01			.29	
FARGO WB AIRPORT	//					.01																			.10	
GARRISON			.01	.01		.05	.08	.06	.04	.02		.03		.06	.03										.47	
GLEN ULLIN					.07	.13	.11	.05						.02	.15										.36	
GRAND FORKS CAA	//																	.12	.02	.01				.15		
GRAND	//	*	*	*	*	*	*		.08	.07	.50	.25	.05	.13	.30	.27	.23								1.90	
RANNAFORD									.49																.45	
HAZELTON RR STATION	//								.02	.02	.01		.02												.07	
HURDSFIELD																		.22							.22	
JAMESTOWN CAA	//															.10	.13	.08	.05	.04	.05		.01	.21		
KRAMER 5 SE							.03	.05	.27	.15	.07	.03						.08	.05	.04				.83		
MC GREGOR RR STATION					.01	.11	.23	.20	.25	.21	.04	.05												1.10		
MINOT CAA	//						.04	.15	.60	.08	.02		.10	.01	.54	.10								1.64		
MOTT RR STATION		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
OAKES WATER WORKS																									.02	
PEMBINA CAA	//											.01	.01	.01		.01		.01						.05		
SARLES 3 E	//				.05	.02	.01	.01	.02	.02	.05	.05	.02			.14	.03	.08	.05	.15	.35	.10	.05	.05	1.03	
WAPPETON POWER PLANT						.06	.07	.02	.02									.01							.16	
WILLISTON WB CITY																									.23	
																										-10th-
DEVILS LAKE WB CITY			.01	.01												.02									.04	
GRAND FORKS CAA	//				.65	.05																			.70	
KRAMER 5 SE		.02																								

NORTH DAKOTA
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TABLE 4 — Continued

HOURLY PRECIPITATION

NORTH DAKOTA
AUGUST 1948

STATION	A. M. HOUR ENDING												P. M. HOUR ENDING												TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
HANNAFORD PEMBINA CAA WARPETON POWER PLANT	//	*	.15	.15	.23	.12													.05						.05
GRANO MC GREGOR RR STATION	//																								.05
DEVILS LAKE WB CITY FARGO WB AIRPORT GRAND FORKS CAA GRANO HANNAFORD KRAMER 5 SE MC GREGOR RR STATION	// // // // // // //	.01		.01	.01	.01	.09	.12	.01																.03
		.05		.01	.03	.07	.01	.01	.01																.25
		.05																							.14
		.05	.05	.03	.19				.37																.05
																									.37
																									.32

DAILY TEMPERATURES

Table 5

Station		Day of month																															Average	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
ALMONT 7 SW	MAX	82	82	78	78	76	63	63	66	75	82	89	87	89	91	94	98	94	98	102	89	92	89	96	90	89	89	92	96	89	99	90	86.7	
	MIN	46	47	47	51	57	58	55	55	60	56	56	57	56	58	61	64	58	61	67	59	55	58	67	63	56	57	58	59	62	59	71	57.9	
AMIDON	MAX	78	73	73	77	75	75	77	65	73	81	84	82	82	85	89	90	91	97	98	89	88	92	93	89	82	85	92	92	92	98	95	84.9	
	MIN	46	45	41	45	52	58	53	56	58	50	52	51	53	54	50	58	55	55	65	52	54	56	64	59	50	49	49	57	55	70	67	54.2	
ARVILLA STATE PARK	MAX	76	76	76	78	80	73	76	80	73	78	80	85	84	88	90	83	85	88	92	86	90	88	97	95	85	94	86	82	85	91	92	84.3	
	MIN	48	47	45	45	42	50	48	44	56	61	53	52	59	58	59	54	54	48	60	67	47	59	57	59	54	51	56	57	53	50	60	53.3	
ASHLEY	MAX	78	77	72	75	75	60	65	70	78	84	86	85	84	84	82	89	90	90	88	90	83	89	83	100	97	80	93	83	93	83	93	83.1	
	MIN	42	50	44	52	55	54	54	60	55	52	55	48	56	51	60	58	51	64	47	57	58	60	47	53	61	59	63	53	52	54.5			
BALDRILL	MAX	80	79	77	79	79	64		74	72	81	81	83	84		90	85	87	85	91	86		90	100	100	82	96	74		88	92	83.8		
	MIN	39	45	42	48	57	54		48	64	50	56	57	58		56	54	49	61	67	47		54	64	49	54	55	56		52	65	53.9		
BELCOURT INDIAN RES	MAX	73	72	69	72	75	69	63	69	64	73	76	77	81	82	84	79	82		90	79	83	78	85	83	81	81	78	76	82	88	85	77.6	
	MIN	42	35	48	38	49	52	49	54	57	49	53	53	56	49	50	52	42		59	59	42	46	64	52	47	48	48	57	50	55	65	50.6	
BELFIELD	MAX	79	80	79	78	74	80	81	70	74	82	86	85	87	87	93	92	91	97	87	91	93	95	85	87	88	87	94	93	92	99	86	86.2	
	MIN	43	42	39	41	53	58	53	53	57	50	47	47	46	52	51	58	50	53	59	45	52	57	57	48	50	48	46	52	56	57	64	51.1	
BISBEE	MAX	77	73	72	74	77	72	68	69	70	71	76	81	84	85	87	80	83	85	91	78	87	80	89	85	84	84	79	80	84	91	88	80.1	
	MIN	46	44	45	47	48	55	51	54	53	54	53	58	57	55	57	57	55	52	59	58	49	52	59	62	50	50	51	60	54	56	67	53.8	
BISMARCK WB CITY	MAX	82	74	74	75	72	72	64	73	72	83	88	80	81	88	90	96	92	94	96	82	91	89	95	92	85	89	89	89	86	95	90	84.5	
	MIN	46	52	48	47	59	58	55	57	60	56	55	57	58	62	58	64	60	55	68	62	54	58	62	60	52	55	62	64	65	58	68	57.9	
BISMARCK WB AIRPORT	MAX	80	77	73	77	80	62	65	74	76	83	88	82	87	89	92	98	94	95	97	82	93	91	97	92	86	90	90	90	87	97	91	85.6	
	MIN	43	50	46	47	60	59	56	59	60	54	53	57	56	60	57	60	57	55	69	56	53	56	63	59	49	53	63	61	62	56	57	53.1	
BOTTINEAU	MAX	76	72	72	75	77	72	71	66	66	74	80	80	83	84	86	83	82	84	94	92	85	81	90	90	84	84	81	84	86	90	87	81.0	
	MIN	42	49	51	48	54	55	54	52	57	58	51	53	59	56	55	59	55	54	63	57	54	52	63	64	48	51	53	53	53	57	67	54.7	
BOTTINEAU STATE PARK	MAX	72	73	74	75	76	74	65	71	69	74	79	78	80	82	83	79	81	83	93	81	84	79	88	83	82	81	80	81	81	89	81	79.1	
	MIN	41	42	41	43	55	61	55	54	56	59	49	58	61	59	58	55	51	50	66	58	61	57	59	64	49	58	51	61	52	53	69	55.0	
BOWBELLS RR STATION	MAX	70	71	60	72	75	73	73	60	66	64	78	78	80	81	85	86	79	84	87	95	74	85	82	91	84	84	77	87	70	90	94	78.5	
	MIN	41	43	53	41	56	57	55	54	57	52	51	53	52	58	52	60	51	49	63	57	49	48	53	62	49	52	50	45	50	55	63	52.6	
BOWMAN COURT ROUSE	MAX	75	76	75	76	75	76	77	76	74	79	84	83	84	85	91	91	92	95	100	100	90	96	92	95	92	84	93	94	93	103	94	86.8	
	MIN	58	41	46	44	54	60	53	57	57	51	53	51	51	51	56	59	54	57	62	55	51	58	59	61	48	52	54	60	59	62	67	54.9	
BUTTE 4 W	MAX	75	74	72	74	73	69	68	66	69	79	77	79	84	83	88	84	84	90	96	89	91	89	93	88	88	83	88	84	88	96	89	82.3	
	MIN	50	59	45	49	56	57	55	57	59	56	58	55	61	57					68	62	55	54	59	67	56	59	52	52	56	61	68	57.1	
CARRINGTON	MAX	77	74	74	75	76	76	65	67	68	78	80	80	85	85	88	82	86	87	92	77	89	80	96	90	83	89	85	86	95	87	91	82.0	
	MIN	43	45	45	43	45	48	48	50	52	49	50	50	54	55	57	55	54	55	55	59	54	53	59	59	51	51	53	55	54	57	50	51.9	
CARSON 2 SW	MAX	78	77	65	77	73	64	63	65	76	82	89	85	90	90	94	98	90	100	103	85	94	90	96	90	89	90	94	93	90	100	90	85.8	
	MIN	45	48	45	50	56	59	55	55	58	60	54	53	55	54	60	63	55	59	66	57	53	58	64	62	51	55	60	61	62	57	68	56.7	
CASSELTON	MAX	77	79	78	78	77	74	70	76	73	80	81	83	84	85	89	87	87	88	90	89	88	87	98	99	96	95	92	87	83	89	92	84.9	
	MIN	50	48	51	48	46	57	58	53	61	60	56	58	56	59	58	58	58	55	61	70	54	57	67	68	55	65	61	60	58	58	67	57.8	
CAVALIER POWER PLANT	MAX	75	73	76	77	79	75	76	81	78	74	79	81	79	85	86	86	83	84	91	90	91	89	91	91	87	92	83	81	82	94	91	83.2	
	MIN	52	53	51	48	49	55	49	51	56	60	56	52	58	59	58	56	60	51	59	59	51	55	58	63	55	56	51	61	59	52	69	55.5	
CENTER	MAX	79	77	73	77	79	63	62	66	75	80	85	82	84	83	90	90	87	92	97	84	90	85	92	88	87	85	89	87	89	95	89	83.3	
	MIN	36	45	39	38	49	58	56	54	60	52	41	49	48	56	46	49	47	47	42	58	47	47	61	57	39	52	54	56	52	45	63	49.8	
COOPERSTOWN	MAX	76	75	72	75	77	74	65	72	70	76	78	80	85	86	89	84	87	88	91	86	90	86	98	93	84	92	80	84	80	92	91	82.5	
	MIN	45	52	48	48	50	56	54	48	60	59	52	56	58	60	58	59	55	51	62	66	51	55	64	63	51	56	56	59	55	58	68	55.9	
CROSBY	MAX	72	78	72	74	77	76	77	75	72	71	81	80	85	85	87	89	88	87	91	89	98	98	88	85	94	89	83	78	93	83	96	98	83.6
	MIN	43	50	40	42	52	59	54	51	57	48	51	48	52	47	52	53	54	55	50	54	46	47	54	57	59	48	50	44	48	46	55	50.5	
DEVILS LAKE WB CITY	MAX	76	71	73	75	77	72	67	73	67	76	77	82	85	85	89	81	86	86	94	76	90	86	90	89	86	88	80	82	85	93	91	81.5	
	MIN	46	48	48	46	49	57	52	48	60	60	52	58	57	59	55	58	57	52	62	59	52	56	60	63	53	58	55	60	54	60	62	55.4	
DICKINSON CAA	MAX	76	75	73	76	72	70	72	63	72	80	85	81	86	85	89	89	91	96	100	78	89	92	93	85	86	84	90	90	98	86	83.6		
	MIN	46	47	42	48	54	59	56	57	56	53	54	52	53	56	56	60	55	59	65	52	51	60	63	55	50	54	49	59	57	63	56	54.7	
DICKINSON EXP STATION	MAX	76	76	77	73	77	71	69	74	64	74	81	86	82	87	85	90	90	92	98	102	78	90	93	94	86	88	84	92	91	91	99	84.2	
	MIN	38	44	40	46	55	58	56	55	59	52	48																						

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Table S-Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
DUNN CENTER	MAX MIN	76 44	79 39	80 38	79 41	77 49	77 59	66 57	75 51	72 53	77 50	86 47	88 48	85 48	88 48	89 51	95 55	90 52	92 49	99 52													
DUNSEITH ST SANITARIUM	MAX MIN	75 45	70 45	75 51	72 48	74 53	70 53	66 52	66 57	64 58	72 58	76 51	76 55	80 57	80 55	83 58	80 53	81 59	90 60	89 59	82 47	82 52	91 62	86 64	82 51	81 52	78 51	78 52	83 52	88 53	85 66	78.5 54.1	
ECKMAN	MAX MIN	72 40	76 44	72 42	73 45	75 54	74 57	72 55	63 57	66 59	65 55	77 54	80 53	80 53	89 53	85 57	86 59	82 51	84 50	85 57	95 58	75 48	85 47	84 58	90 61	85 46	85 49	80 52	82 50	78 54	86 55	90 56	79.7 52.5
EDMORE 1 W	MAX MIN	76 42	73 45	74 47	73 46	75 46	73 56	70 51	74 45	74 46	78 49	80 52	81 56	83 57	85 55	77 56	83 55	83 49	89 61	90 62	86 47	82 52	88 60	88 61	84 49	82 52	75 53	81 63	80 50	90 59	80.1 53.5		
ELBOWOODS	MAX MIN	80 39	76 44	75 41	77 54	69 60	70 56	65 56	64 55	73 60	80 53	83 49	89 51	90 49	86 47	92 52	87 59	88 52	91 50	102 50		79 62	92 48	90 50	94 61	88 64		90 45	85 54	84 54	96 53	83.7 52.4	
ELLEDALE NORMAL SCH	MAX MIN	78 47	76 52	71 63	69 48	73 50	67 57	64 54	67 57	80 58	78 55	85 62	80 54	78 61	79 54	83 67	82 67	89 71	87 56	91 67	84 59	86 67	87 54	98 67	96 59	79 53	89 57	87 61	91 58	83 93	92 55	82.0 57.7	
EPPING	MAX MIN	80 45	80 42	80 43	77 50	74 55	74 58	75 55	73 55	73 58	82 52	84 53	80 55	86 53	89 59	85 62	88 57	92 58	100 65	89 54	88 50	89 57	96 65	92 61	85 52	82 53	95 55	85 50	95 56	95 60	88 62	85.1 55.2	
FARGO WB AIRPORT	MAX MIN	76 47	78 53	75 50	77 48	78 51	66 50	70 56	76 50	77 62	79 60	80 54	81 58	82 57	79 60	88 56	87 59	88 53	84 64	89 55	85 61	88 52	87 67	99 100	79 56	94 63	74 62	84 63	82 59	89 59	91 58	82.5 57.4	
FESSENDEN	MAX MIN	76 46	72 49	71 47	75 46	76 60	68 50	67 56	69 55	70 54	77 59	80 61	80 65	86 54	84 58	88 62	85 59	85 58	88 56	94 60	86 60	89 52	88 58	91 56	87 64	85 53	85 57	84 59	83 55	87 58	94 90	81.9 56.1	
FORMAN	MAX MIN			79 55	78 48	78 54	75 56	62 54	72 52	78 59	85 60	87 54	84 56	85 56	79 62	91 58	92 62	88 62	86 61	93 62	86 59	88 52	92 66	98 100	98 55	94 53	93 59	91 59	89 60	94 56	86.3 58.4		
FORT YATES	MAX MIN	78 40	79 45	75 49	77 44	76 69	70 59	66 57	73 58	81 62	84 57	87 50	84 54	85 50	88 56	92 54	101 59	94 60	98 52	91 72	85 63	96 49	94 52	98 62	94 67	80 46	92 49	94 66	90 59	88 67	96 50	86.5 56.5	
FOXHOLM WILDLIFE REF	MAX MIN	76 49	74 44	78 48	77 41	75 52	74 56	64 54	68 56	67 57	77 55	81 52	80 55	84 56	83 55	91 56	84 55	82 59	87 61	95 53	85 61	85 52	85 50	92 59	91 62	85 48	84 57	87 49	86 53	86 54	92 54	82.1 54.3	
FULLERTON	MAX MIN	82 44	81 49	74 53	76 47	79 48	69 56	64 54	73 58	80 58	83 58	87 53	84 56	87 58	81 61	91 55	91 62	91 56	91 53	93 57	85 65	84 52	91 65	102 60	99 61	78 53	96 56	80 64	95 59	86 62	97 54	85.4 56.6	
GACKLE	MAX MIN	75 45	73 49	72 51	73 46	76 69	63 53	61 52	68 56	75 55	80 56	83 55	79 54	84 55	83 56	86 55	88 57	86 53	87 63	91 68	88 62	86 51	84 56	95 59	89 67	89 54	89 55	87 62	85 59	92 56	93 56	82.4 55.5	
GARRISON	MAX MIN	79 41	73 51	74 42	76 45	76 58	70 59	70 55	66 54	72 58	80 54	84 51	80 52	85 56	85 51	90 56	87 55	87 54	91 65	97 54	78 50	90 54	87 61	93 62	87 49	86 52	85 54	90 52	84 56	88 59	94 56	83.0 54.5	
GRAFTON STATE SCHOOL	MAX MIN	76 48	74 49	73 52	76 45	76 50	75 54	74 52	79 50	78 59	74 56	79 54	81 54	86 58	85 60		85 57	89 60	87 62	88 56	85 60	90 62	96 56	90 61	96 55	90 54	93 54	73 57	80 58	84 55	90 60	82.7 55.6	
GRAND FORKS CAA	MAX MIN	75 49	74 52	74 47	79 45	80 50	75 54	77 52	81 50	72 59	76 56	77 54	80 54	83 58	83 60	85 60	80 57	85 58	82 60	89 57	81 53	88 61	88 64	95 62	95 62	84 59	93 58	73 59	80 55	84 60	91 60	82.2 55.8	
GRAND FORKS UNIVERSITY	MAX MIN	76 47	75 52	74 47	77 45	78 50	74 55	74 53	80 57	73 60	77 59	78 53	80 56	82 58	82 60	86 59	80 62	84 57	80 66	89 54	81 66	88 51	88 60	94 65	92 59	82 50	91 65	72 58	80 62	87 55	87 68	81.4 57.0	
GRANVILLE	MAX MIN	75 47	68 44	72 43	74 46	73 46	72 56	66 55	67 53	66 53	76 53	78 52	78 54	83 57	81 54	85 56	83 58	83 55	86 52	96 63	83 59	87 50	85 50	98 60	85 65	85 49	82 54	84 51	82 53	87 55	94 56	80.7 53.8	
GRENORA	MAX MIN	80 47	75 45	77 44	77 59	78 49	76 48	75 50	73 53	70 54	82 52	84 55	81 60	86 57	87 61	89 53	85 58	96 54	92 65	93 55	95 52	97 58	94 50	98 54	86 58	82 58	95 52	88 45	97 57	98 70	85.9 54.7		
HANKINSON RR STATION	MAX MIN	80 48	79 55	81 54	70 49	78 51	78 57	64 55	63 56	70 55	76 61	83 57	81 59	83 55	84 57	73 56	89 55	88 59	88 62	85 68	92 54	87 58	90 60	99 65	98 58	79 63	95 63	80 61	88 59	85 55	88 56	82.6 57.4	
HANNAH	MAX MIN	70 43	72 44	72 42	73 46					75 48	76 48	74 52	77 53	71 53	80 54	80 56	78 55	78 56	80 60	82 72	72 60	84 51	81 53	82 60	81 61	80 52	83 55	75 48	75 61	81 62	88 60	78.0 53.6	
HANSBORO	MAX MIN	75 45	76 51	72 43	73 40	75 45	69 53	66 46	72 45	65 52	73 56	78 52	83 53	83 55	86 55	77 51	86 55	83 51	89 58	78 54	88 51	83 48	85 57	85 63	83 49	85 51	79 47	81 51	90 55	88 57	79.8 51.2		
HETTINGER	MAX MIN	77 40	78 42	74 47	77 41	74 55	72 59	75 55	69 57	75 58	82 49	86 49	82 52	85 66	87 48	89 50	93 62	94 51	96 66	100 47	99 56	93 62	96 54	97 44	95 48	85 48	87 50	92 58	94 57	91 52	86.5 56.6		
HILLSBORO	MAX MIN	78 48	76 56	74 50	78 48	79 46	72 46	75 56	78 48	71 59	80 60	80 54	81 57	80 55	85 55	90 54	83 59	87 56	85 54	91 65	85 51	90 60	88 64	99 64	100 53	80 51	80 51	78 59	81 61	82 57	90 57	82.8 55.6	
JAMESTOWN CAA	MAX MIN	77 45	76 52	76 49	76 42	79 47	61 51	63 54	70 61	80 62	83 59	86 54	85 56	89 63	85 55	86 51	87 56	93 62	81 55	89 62	78 55	96 57	94 62	84 									

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Station		Day of month																															Average	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
MAX	MAX		79	70	72	76	76	71	62	65	69	80	82	81	89	85	90	84	85	90	94	76	91	86	90	87	88	84	88	81	87	94	81.7	
	MIN		50	45	48	55	58	58	54	58	52	52	52	56	52	57	59	58	55	64	58	50	56	60	60	50	53	52	55	57	55	62	55.0	
MAYVILLE	MAX	75	76	74	77	79	69	73	77	74	78	80	79	83	84	90	81	88	85	91	88	90	86	98	100	93	94	83	85	81	90	91	83.6	
	MIN	48	53	48	47	53	55	57	48	60	52	53	58	59	57	60	59	55	52	60	69	53	59	65	68	55	59	57	60	57	58	60	56.6	
MC CLUSKY	MAX	73	77	73	72	77	77	67	63	64	73	78	82	81	86	87	90	85	88	90	96	77		89	93	88	87	86	86		86	96	81.6	
	MIN	43	51	46	47	53	51	54	57	59	55	54	54	57	55	57	60	56	54	64	58	50		54	63	51	54	56	56		56	63	54.9	
MC HENRY 6 N	MAX	75	72	71	74	76	67	64	70	69	75	77	80	84	83	87	79	85	84	91	78	89	81	94	90	83	89	77	84	80	91	90	80.3	
	MIN	44	47	46	44	47	55	53	43	55	57	53	52	55	59	55	56	53	51	60	63	51	53	60	62	50	53	55	58	53	57	67	53.8	
MC LEOD 3 E	MAX	80	79	77	78	79	65	64	72	73	84	86	84	84	77	89	85	87	88	88	86	87	89	97	99	94	97	97	88	87	91	93	84.6	
	MIN	45	48	46	48	52	55	56	55	61	57	54	57	54	60	55	58	57	58	64	70	50	60	67	62	68	53	55	60	60	56	66	57.0	
MEDORA STATE PARK	MAX		76	78	73	78	73	68	78	83	87	86	86	87	93	97	100	101	86	88	90	94	95	86	90	86	92	92	94	103	90	87.2		
	MIN		48	45	60	64	63	62	60	52	49	60	60	61	57	60	57		54				60	60	52		60				71			
MEDORA TRNM	MAX	78	77	76	79	76	76	82	76	76	81	87	84	85	86	91	91	94	99	101	94	91	93	96	92	89	85	96	92	94	102	97	87.6	
	MIN	47	39	36	41	52	51	49	59	45	48	47	47	46	50	50	45	47	49	67	52	42	50	57	55	42	46	45	51	57	59	54	49.2	
MILNOR	MAX	80	78	76	78	80	80	75	70	75	85	85	86	88	82	86	88	90	87	89	85	90	88	98	100	80	95	78	90	88	92	95	85.1	
	MIN	45	54	56	45	47	42	45	48	55	56	52	56	54	52	56	58	55	56	54	52	52	50	63	62	50	54	52	60	54	62	63	53.5	
MINOT CAA	MAX	77	70	72	76	73	71	62	66	66	78	81	79	83	84	89	85	85	88	97	76	87	86	91	86	86	81	87	81	88	94	87	81.0	
	MIN	45	46	43	46	57	56	56	58	55	54	56	61	56	59	58	55	58	57	58	66	59	55	53	59	62	52	58	51	55	55	61	60	55.6
MINOT EXP FARM	MAX	77	75	71	76	74	71	63	66	68	78	80	80	84	85	89	85	85	88	96	87	87	86	91	86	87	81	87	81	88	94	86	81.7	
	MIN	43	44	42	44	43	55	54	53	57	52	51	54	58	53	57	57	55	53	63	57	51	57	59	61	49	55	48	52	52	57	69	53.4	
MOHALL	MAX	75	71	72	75	74	73	65	68	63	78	79	81	81	85	84	81	82	86	95	77	84	83	88	83	83	78	84	78	85	90	84	79.5	
	MIN	43	44	45	44	53	57	55	58	58	51	49	55	56	55	57	59	53	58	62	58	52	47	57	60	49	54	49	48	53	53	56	53.2	
MOTT	MAX	78	76	75	77	76	68	70	75	76	80	87	83	86	87	92	94	92	98	101	92	91	95	90	87	88	84	90	93	90	98	88	85.7	
	MIN	42	43	43	41	55	57	56	55	56	54	50	48	49	52	53	62	54	55	65	56	46	55	64	55	46	48	50	54	56	54	62	52.8	
MUNICH 4 SW	MAX	75	72	72	73	75	71	78	74	66	72	76	76	80	82	84	75	82	81	87	78	85	79	87	86	83	84	75	80	79	90	89	78.9	
	MIN	41	44	46	44	47	55	49	44	55	59	52	56	57	52	56	54	55	48	61	68	60	50	57	59	58	50	52	50	59	52	58	64	53.1
NAPOLEON 2 SE	MAX	74	74	70	71	73	69	63	70	76	80	81	78	81	80	84	88	87	86	90	83	88	77	93	90	83	87	86	89	84	93	91	81.3	
	MIN	53	49	48	46	50	56	54	57	60	56	54	55	52	59	56	61	56	52	64	62	48	55	60	64	50	52	59	60	58	52	66	55.6	
NEW ENGLAND	MAX	77	80	75	74	78	72	72	74	66	73	81	88	87	87	86	90	92	94	92	95	100	82	92	95	94	89	89	87	92	91	90	88	85.2
	MIN	44	46	43	42	54	59	56	52	54	56	52	51	50	51	52	49	61	53	54	62	55	49	58	61	55	45	50	50	60	57	55	68	53.2
NEW SALEM 1 S	MAX	80	78	73	78	79	65	62	66	73	82	89	84	88	86	92	92	93	98	102	86	93	92	95	90	88	89	92	91	88	98	92	85.6	
	MIN	46	51	46	45	54	50	48	52	54	56	54	56	55	54	57	57	58	57	64	58	56	59	62	60	62	56	54	58	62	58	59	55.4	
OAKES WATER WORKS	MAX	81	81	79	75	78	85	63	63	74	82	87	88	85	88	81	92	94	91	91	95	88	90	91	100	102	81	96	87	94	89	96	86.0	
	MIN	46	49	55	50	50	56	55	57	60	58	53	58	57	62	55	56	59	57	60	68	49	57	63	61	53	58	62	58	63	56	60	56.8	
PARK RIVER	MAX	75	75	74	75	77	74	73	78	71	75	79	80	79	83	86	85	84	82	91	89	90	85	89	93	86	91	86	81	83	92	93	82.4	
	MIN	40	48	42	47	45	43	40	51	56	60	55	54	60	60	58	58	59	53	55	67	51	55	59	61	58	57	53	58	54	62	64	54.3	
PARSHALL	MAX	79	68	72	77	75	74	68	64	71	80	84	81	85	85	90	87	85	91	100	86	87	88	94	89	86	84	90	83	90	95	87	83.1	
	MIN	46	43	38	43	58	59	56	51	59	47	49	51	53	48	64	58	52	53	73	57	46	63	60	73	53	47	51	51	54	53	71	54.2	
PEMBINA CAA	MAX	72	72	79	76	77	77	78	81	68	70	75	79	77	84	83	73	80	82	89	78	88	80	89	8									

DAILY TEMPERATURES

NORTH DAKOTA
AUGUST 1948

Table 5-Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
WABPETON STATE SCHOOL	MAX	78	79	77	76	78	75	65	74	74	83	84	82	82	82	86	86	86	86	88	87	86	90	97	98	96	92	90	87	87	89	91	84.2
	MIN	45	53	55	49	48	58	56	55	61	59	55	57	59	59	56	59	58	55	60	71	53	59	70	65	55	66	68	60	60	59	67	58.4
WASHBURN	MAX	78	76	73	76	76	73	69	69	73	81	86	81	85	84	89	90	88	90	94	90	90	87	91	90	85	85	86	85	84	94	88	83.4
	MIN	46	50	45	49	60	59	55	57	60	54	55	55	59	57	59	61	60	60	69	61	54	58	65	64	52	57	57		60	69	57.5	
WATFORD CITY	MAX	80	72	77	79	73	75	79	74	73	82	86	84	78	88	92	90	89	95	100	84	91	90	97	87	87	82	95	88	94	97	88	85.4
	MIN	46	53	40	51	59	61	55	56	59	52	52	53	53	51	58	60	55	55	71	59	49	56	66	61	52	56	55	51	54	58	66	55.6
WESTHOPE	MAX	79	76	76	76	72	74	71	68	70	80	82	81	84	68	88	87	84	86	86	85	88	93	94	90	86	83	83	81	93	90	87	82.6
	MIN	44	51	47	51	56	57	55	59	59	52	53	58	58	56	59	60	55	54	63	56	50	51	56	63	48	53	50	51	55	65	61	55.0
WILLISTON WB CITY	MAX	79	70	75	77	72	74	79	74	73	81	84	83	80	87	89	88	88	95	98	78	87	90	94	81	84	79	94	85	94	96	88	83.7
	MIN	47	52	43	56	62	61	59	58	60	54	53	57	56	54	59	63	58	57	70	58	53	54	62	60	56	59	59	51	60	55	62	57.0
WILLOW CITY	MAX	77	73	72	75	75	71	63	66	66	77	79	80	84	82	87	80	89	85	94	82	87	82	90	85	85	84	81	84	85	90	85	80.5
	MIN	44	43	46	42	52	56	52	50	55	59	51	56	59	56	60	57	56	50	60	60	48	51	60	65	48	49	52	56	53	54	66	53.7
WILTON RR STATION	MAX	73	75	74	71	75	77	68	63	69	69	78	83	80	83	84	88	89	87	89	93	76	88	86	90	85	86	83	85	89	82	93	81.0
	MIN	45	48	46	47	52	53	52	52	58	53	54	50	53	54	56	58	56	54	60	58	48	51	62	63	51	52	55	56	59	53	56	53.7
WISHEK	MAX	76	75	80	78	74	77	61		73	79	81	88	82	85	82	91	90	89	88	90	80		89	100	93	80	91	86	91	81	93	83.6
	MIN	37	44	52	43	44	56	53		53	54	47	46	49	49	52	61	58	49	61	62	46		52	60	47	49	58	57	63	51	53	51.9

See reference notes following Station Index.

TABLE 6

NORTH DAKOTA
AUGUST 1948

DAILY EVAPORATION (INCHES) AND WIND MOVEMENT (MILES)

STATION		DAY OF MONTH																															TOTAL	DEPART- URE FROM NORMAL
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OICKINSON EXP STATION	EVAP	.156	.90	.195	.140	.285	.70	.100	.180	.61	.139	.155	.205	.150	.295	.75	.230	.220	.250	.360	.377	.273	.230	.165	.250	.365	.200	.160	.210	.230	.185	.345	6,346	
	WIND	100	35	55	65	70	135	120	105	115	95	30	75	30	80	40	55	75	60	145	185	100	85	85	90	120	115	65	90	140	30	160	2750	
MANDAN EXP STATION	EVAP	.259	.159	.122	.123	.243	.206	.39	.48	.23	.134	.156	.190	.139	.182	.160	.178	.240	.258	.288	.317	.260	.265	.154	.156	.310	.282	.220	.171	.303	.204	.255	6,044	
	WIND	119	44	55	60	166	199	154	83	99	108	61	80	95	21	33	35	110	75	157	198	106	94	122	40	98	71	94	68	139	105	140	3029	

TABLE 7
DAILY RIVER STAGES (FEET)

RIVER AND STATION	FLOOD STAGE	DAY OF MONTH																															HIGHEST (OR CREST)	DATE	LOWEST	DATE
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
MISSOURI WILLISTON L. C. BRIDGE BISMARCK WATER WORKS	20	7.4	7.2	7.2	7.3	7.2	7.2	7.4	7.7	7.9	7.7	7.9	7.5	7.4	7.5	7.5	7.3	7.2	7.2	7.1	7.0	7.0	7.0	6.8	6.6	6.5	6.4	6.4	6.6	6.5	6.5	6.6	7.90	9+	6.40	26
	19	8.7	8.8	8.9	8.7	8.4	8.4	8.7	8.6	8.6	9.0	9.4	9.5	9.6	9.6	9.4	9.2	9.2	9.2	8.9	9.0	8.9	8.5	8.6	8.6	8.5	8.8	8.2	8.1	7.8	7.9	7.9	9.60	13+	7.8	29

Readings are made at approximately 7 A. M. (local time). They are provisional and subject to correction. Final and corrected stages will be published in the annual publication "Daily River Stages - Principal Rivers of the United States". The following reference notes apply only to Table 7, Daily River Stages:

- | | | | |
|---|-----------------------------|---|--------------|
| a | Obstructed by rough ice | f | Shore ice |
| b | Frozen but open at gage | g | Floating ice |
| c | Upper surface of smooth ice | h | Pool stage |
| d | Ice gorge above gage | i | Ory at gage |
| e | Ice gorge below gage | j | Interpolated |

STATION INDEX

NORTH DAKOTA
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STATION	INDEX NO.	COUNTY	DRAINAGE	LAT.		LONG.	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
								ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
ADAMS 7 S	0022	WALSH	REO	48	20	98 06		CST		7A				MYRA J SOTA	2 3
ALEXANDER RR STATION	0096	MC KENZIE	YELLOWSTONE	47	50	103 38	1200	MST		8A		8		ARTHUR J SAUMAN	2 3
ALMONT 7 W	0136	MORTON	HEART	46	43	101 39	2300	MST	7P	7P	6	6		HOGAN RAMSLAND	2 3 5
ALPHA 1 S	0149	GOLDEN VALLEY	LIT MISSOURI	46	37	103 49		MST		7P	23	23		R A BURY	2 3
AMIOON	0209	SLOPF	CANNONBALL	46	29	103 19	2908	MST	5P	5P	27	27		STANLEY W SOLE	2 3 5
ARVILLA STATE PARK	0369	GRAND FORKS	RED	47	56	97 30	960	CST	6P	6P	5	5		ALBERT TROREN	2 3 5
ASHLEY	0382	MC INTOSH	MISSOURI	46	02	99 22	2025	CST	8A	8A	53	53		W E DREY	2 3 4 5
SALO HILL DAM	0450	SARNES	SHEYENNE	47	02	98 05	1300	CST	8A	8A	1	1		F A JOHNSON	2 3 5
SALFOUR RR STATION	0492	MC HENRY	SOURIS	47	57	100 32		CST						C G THOMSON	2 3 4
BELCOURT INDIAN RES	0626	ROLETTE	PEMBINA	48	50	99 45	1960	CST	7P	7P	4	4		TURTLE MT INDIAN AG	2 3 5
BELFIELD	0639	STARK	HEART	46	52	103 11	2592	MST	7P	7P	31	31		CARL INDERGAARO	2 3 5
BEULAR	0766	MERCER	KNIFE	47	16	101 47	1780	MST		7P				KNIFE RIVER COAL MNG	2 3
BISBEE	0796	TOWNER	DEVILS LAKE	48	37	99 22	1601	CST	6P	6P	46	46		ROBERT L PETERSON	2 3 5
BISMARCK WATER WORKS	0809	BURLEIGH	MISSOURI	46	49	100 49	1628	CST	7A	7A				BISMARCK BATER PLANT	2 3
BISMARCK WB CITY	0814	BURLEIGH	MISSOURI	46	48	100 48	1670	CST	10A	10A	74	74		U S WEATHER BUREAU	2 3 5
BISMARCK WB AIRPORT	0819	BURLEIGH	MISSOURI	46	46	100 45	1650	CST	MID	MID	9	9		U S WEATHER BUREAU	2 3 4 5
BOTTINEAU	0941	BOTTINEAU	MISSOURI	48	50	100 27	1638	CST	4P	4P	57	57		N O SCHOOL OF FRSTRY	2 3 5
BOTTINEAU STATE PARK	0946	BOTTINEAU	SOURIS	48	56	100 22	2160	CST	6P	6P	5	5		PARK SUPT	2 3 5
BOWBELLS RR STATION	0961	BURKE	SOURIS	48	48	102 15	1958	CST	8A	8A	23	23		CHARLES KAUFMAN	2 3 5
BOWMAN COURT ROUSE	0995	BOWMAN	GRAND	46	11	103 23	2872	MST	5P	5P	34	34		O B HOOK	2 3 4 5
BRIEN	1052	NORTON		46	23	100 57	1719	CST		8A				MELVIN NELSON	
BUTTE	1225	MC LEAN	SOURIS	47	50	100 40	1740	CST	6P	6P	24	24		M O ANDERSON	2 3 5
CARRINGTON	1360	FOSTER	JAMES	47	27	99 08	1579	CST	7A	7A	51	51		SOO LINE AGENT	2 3 5
CARSON 2 SW	1370	GRANT	HEART	46	23	101 35	2500	MST	7P	7P	37	37		J W EVENS	2 3 5
CASSELTON	1400	CASS	RED	46	54	97 13	934	CST	5P	5P	53	53		WALLACE G SWEENEY	2 3 5
CAVALIER POWER PLANT	1435	PEMBINA	PEMBINA	48	48	97 38	894	CST	5P	5P	13	41		CITY LIGHT & POWER	2 3 5
CENTER	1456	OLIVER	MISSOURI	47	07	101 18	2100	MST	7P	7P	11	11		FRED L REINZ	2 3 5
COCKSWELL 6 W	1525	SARGENT	JAMES	46	07	97 55	1291	CST		7A	4	4		JORN WADSWELL	2 3
COLGATE	1686	STEELE	RED	47	14	97 39	1180	CST		6P		15		O M JENSEN	2 3
COOPERSTOWN	1766	GRIGGS	SHEYENNE	47	26	98 07	1428	CST	5P	5P	52	52		R J LOCKNER	2 3 5
COURTENAY	1816	STUTSMAN	JAMES	47	13	98 34	1523	CST		6P		15		G R HANAWALT	2 3
CROSBY	1871	OLIVIER	SOURIS	48	54	103 18	1954	CST	7A	7A	42	42		VERNON V NICROLS	2 3 5
DAWSON	2018	KIDDER	MISSOURI	46	52	99 45	1730	CST		MID		8		LOUIS J BILLINGTON	2 3 4 5
DEVILS LAKE WB CITY	2158	RAMSEY	DEVILS LAKE	48	07	98 52	1471	CST	MID	MID	44	73		U S WEATHER BUREAU	2 3 4 5
DICKINSON CAA	2183	STARK	HEART	46	48	102 48	2587	MST	MID	MID	8	8		CAA	2 3 4 5
DICKINSON EXP STATION	2188	STARK	HEART	46	53	102 48	2460	MST	7A	7A	57	57		LEROY MOOMAW	2 3 5 6
DRAKE	2298	MC RENRY	SOURIS	47	55	100 22	1634	CST	7A	7A	19	19		GEORGE A PAULUS	2 3 5
DUNN CENTER	2365	KNIFE	KNIFE	47	21	102 37	2191	MST	6A	6A	50	50		FRANK R SOMMARS	2 3 5
DUNSEITH ST SANITARIUM	2385	ROLETTE	SOURIS	48	50	100 02	2001	CST	5P	5P	53	53		STATE TUBERCULOSIS	2 3 5
ECKMAN	2472	BOTTINEAU	SOURIS	48	39	101 03	1500	CST	7A	7A	43	43		E R SHERMAN	2 3 5
EDGELEY EXP FARM	2482	LA MOURE	JAMES	46	20	98 42	1568	CST	6P	6P	48	48		N D AGRI EXP	2 3 5
EDMORE 1 W	2525	RAMSEY	DEVILS LAKE	48	25	98 29	1524	CST	8P	8P	25	25		MIKE OAVIS	2 3 5
ELBOWOODS	2570	MC LEAN	MISSOURI	47	35	102 09	2082	CST	6P	6P	56	56		H W CASE	2 3 5
ELLENOLE NORMAL SCR	2605	OICKEY	JAMES	46	00	98 31	1457	CST	8P	8P	50	50		J E OEMMER	2 3 5
EPPING	2735	WILLIAMS	MISSOURI	48	18	103 21	2224	CST	6P	6P	40	40		T BEACHLER	2 3 5
FAIRFIELD 9 N	2809	BILLINGS	LIT MISSOURI	47	19	103 12	2650	MST		6P		21		MRS EDITH LARSON	2 3
FARGO WB AIRPORT	2859	CASS	REO	46	54	96 48	895	CST	MID	MID	68	68		U S WEATHER BUREAU	2 3 4 5
FESSENDOEN	2949	WELLS	JAMES	47	39	99 37	1610	CST	6P	6P	37	37		JOHN V ZUBER	2 3 5
FORMAN	3117	SARGENT	REO	46	06	97 38	1249	CST	6P	6P	57	57		ART WATERMAN	2 3 5
FORT YATES	3207	SIOUX	MISSOURI	46	05	100 38	1670	MST	6P	6P	49	49		P J JACOBSON	2 3 5
FOXROLM WILDLIFE REF	3217	WARD	SOURIS	48	27	101 33	1609	CST	5P	5P	24	28		U S WILDLIFE REF	2 3 5
FULLERTON	3287	OICKEY	JAMES	46	10	98 25	1439	CST	6P	6P	51	51		F O ALIN	2 3 5
GACKLE	3309	LOGAN	JAMES	46	38	99 08	1951	CST	6P	6P	18	18		OAVID R HAMM	2 3 5
GARRISON	3376	MC LEAN	MISSOURI	47	38	101 25	1911	CST	MID	MID	72	72		MAE N VORACBEK	2 3 4 5
GLEN ULLIN	3496	MORTON	HEART	46	49	101 49	2090	MST	MID			8		NICK GAUER	2 3 4
GOLVA	3556	GOLDEN VALLEY	LIT MISSOURI	46	44	103 59	2781	MST	7P	6A	8	8		CHESTER K PUDA	2 3 5
GRAFTON STATE SCHOOL	3594	WALSH	RED	48	25	97 26	827	CST	5P	5P	57	57		DR J C LAMONT	2 3 5
GRAND FORKS CAA	3616	GRAND FORKS	RED	47	56	97 05	834	CST	MID	MID	8	8		CAA	2 3 4 5
GRAND FORKS UNIVERSITY	3621	GRAND FORKS	RED	47	55	97 05	830	CST	MID	7P	58	58		UNIVERSITY OF N D	2 3 5
GRAND	3676	RENNVILLE	SOURIS	48	37	101 35	1625	CST		MID				ALVIN C REINKE	2 3 4
GRANVILLE	3686	MC RENRY	SOURIS	48	16	100 51	1504	CST	7P	7P	42	42		FRED ROBLE	2 3 5
GRENORA	3736	WILLIAMS	MISSOURI	48	37	103 56	2114	CST	5P	5P	40	40		L D NIELSON	2 3 5
HALLIOAY	3846	OUNN	KNIFE	47	21	102 20	2073	MST		6P		7		JORN KISSE	2 3
RANKINSON RR STATION	3908	RICHLAND	REO	46	04	96 54	1068	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
RANNAFORD	3926	GRIGGS	SHEYENNE	47	18	98 12	1428	CST		MID		8		ROMER A BENSON	2 3 4
RANNAH	3936	CAVALIER	PEMBINA	48	59	98 41	1568	CST	6P	6P	55	55		A E PRIOR	2 3 5
HANSBORO	3963	TOWNER	PEMBINA	48	57	99 23	1597	CST	7P	7P	41	41		W E OISHER	2 3 5
HARVEY WATER WORKS	4013	WELLS	SHEYENNE	47	45	99 53	1596	CST		6P		46		R J REYNOLDS	2 3
HAZELTON RR STATION	4983	EMMONS	MISSOURI	46	29	100 17	1978	CST		MID		8		EPHRAIM ZACRER	2 3 4
RETTINGER	4178	ADAMS	GRAND	46	00	102 38	2675	MST	6P	6P	42	42		EOGAR MARTIN	2 3 5
HUROSFIELD	4343	WELLS	JAMES	47	27	99 55	1915	CST		MID		8		EO BENSRUFF	2 3 4
JAMESTOWN CAA	4413	STUTSMAN	JAMES	46	55	98 41	1497	CST	MID	MID	8	8		CAA	2 3 4 5
JAMESTOWN STATE HOSP	4418	STUTSMAN	JAMES	46	53	98 40	1457	CST	7P	7P	57	57		N D STATE HOSPITAL	2 3 5
KENMARE	4646	WARD	SOURIS	48	40	102 05	1799	CST	MID	MID	17	17		THEO E ECKBERG	2 3 5
KENSAL WILDLIFE REFUGE	4656	STUTSMAN	JAMES	47	15	98 52	1440	CST	7P	7P	8	8		U S WILDLIFE REF	2 3 5
KRAMER 5 SE	4823	BOTTINEAU	SOURIS	48	39	100 37		CST		MID		9		PAUL A KRETSCHMAR	2 3 4
LA MOURE	4937	LA MOURE	JAMES	46	21	98 18	1382	CST	7P	7P	2	2		ANDREW REMICK	2 3 5
LANGDON EXP FARM	4958	CAVALIER	PEMBINA	48	45	98 21	1615	CST	5P	5P	53	53		V STURLAUGSON	2 3 5
LARIMORE	5013	GRAND FORKS	RED	47	54	97 38	1134	CST	7P	7P	56	56		JESSE P PHILLIPS	2 3 5
LEEDS	5078	BENSON	DEVILS LAKE	48	17	99 26	1515	CST	7P	7P	8	8		JORN FAGAN	2 3 5
LINTON	5210	EMMONS	MISSOURI	46	16	100 14	1711	CST	8P	8P	32	32		WM BEYERMAN	2 3 5
LISBON	5220	RANSON	SHEYENNE	46	26	97 41	1091	CST	7A	7A	45	45		ROBERT M JODSAAS	2 3 5
MADDOCK AGR SCHOOL	5434	BENSON	SHEYENNE	47	58	99 30	1604	CST	6P	6P	34	34		BENSON CY A & T	2 3 5
MANDAN EXP STATION	5479	MORTON	HEART	46	48	100 54	1750	MST	8A	8A	35	35		NO GT PLAINS FIELD	2 3 4 5 6
MANDAN FT LINCOLN PARK	5484	MORTON	MISSOURI	46	47	100 52	1700	MST	6P	6P	5	5		ISADORE W SMITH	2 3 5

NORTH DAKOTA
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STATION INDEX — Continued

STATION	INDEX NO.	COUNTY	DRAINAGE	O LAT.	O LONG.	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
MANNING	5519	DUNN	KNIFE	47 14	102 46		MST		6P		8		MISS JEANETTE S DAWES	2 3
MARMARTH	5573	SLOPE	LIT MISSOURI	46 18	103 55	2714	MST	6P	6P	36	40		S P GRANE	2 3 5
MAX	5638	MC LEAN	MISSOURI	47 49	101 17	2093	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
MAYVILLE	5660	TRAIL	RED	47 30	97 19	975	CST	6P	6P	53	53		R A RAGAZ	2 3 5
MC CLUSKY	5710	SHERIDAN	MISSOURI	47 29	100 29	1943	CST	11A	11A	24	31		J A HAMILTON	2 3 5
MC GREGOR RR STATION	5720	WILLIAMS	MISSOURI	48 36	102 56		CST		MID		8		HARTVIN R HERMANSON	2 3 4
MC HENRY 5 N	5730	EDDY	SHEYENNE	47 38	98 35	1509	CST	8P	8P	26	26		C E BLASKY	2 3 5
MC LEOD 3 E	5754	RICKLAND	SHEYENNE	46 24	97 14	1075	CST	7P	7P	37	37		J G CARLSON	2 3 5
MC VILLE	5764	NELSON	RED	47 46	98 11	1467	CST		6P		5		H R KNIEFEL	2 3
MEDINA 1 W	5798	STUTSMAN	MISSOURI	46 53	99 19		CST		6P		8		RUDOLPH GRAF	2 3
MEDORA STATE PARK	5808	BILLINGS	LIT MISSOURI	46 55	103 33	2271	MST	5P	5P	5	34		RARRY ROBERTS	2 3 5
MEDORA TRNMP	5813	BILLINGS	LIT MISSOURI	46 58	103 30	2250	MST	5P	5P				T ROOSEVELT NAT PARK	2 3 5
MILNOR	5933	SARGENT	RED	46 16	97 28	1117	CST	6P	6P	6	6		E W WILSON	2 3 5
MINOT CAA	5988	WARD	SOURIS	48 15	101 17	1724	CST	MID	MID	53	53		CAA	2 3 4 5
MINOT EXP FARM	5993	WARD	SOURIS	48 10	101 18		CST	6P	6P	3	3		N C AGRI EXP ST	2 3 5
MOFFIT RR STATION	6015	BURLEIGH	MISSOURI	46 41	100 18	1760	CST		9A		6		SOO LINE AGENT	2 3
MOHALL	6025	RENVILLE	SOURIS	48 46	101 31	1639	CST	9P	9P	55	55		IVER JOHNSON	2 3 5
MONTPELIER	6105	STUTSMAN	JAMES	46 42	98 35		CST		8A		8		ROLF BANSON	2 3
MOTT RR STATION	6155	HETTINGER	CANNON BALL	46 22	102 20	2440	MST	6P	6P	42	42		NORTHERN PACIFIC AGT	2 3 4 5
MUNICH 4 SW	6195	CAVALIER	DEVILS LAKE	48 38	98 53	1598	CST	7P	7P	1	1		HAROLD FELDNER	2 3 5
NAPOLEON 2 SE	6255	LOGAN	MISSOURI	46 28	99 43	1955	CST	7P	7P	57	57		GLADYS J PETERSON	2 3 5
NEW ENGLAND	6315	HETTINGER	CANNONBALL	46 33	102 52	2621	MST	8A	8A	57	57		ALFRED BASEL	2 3 5
NEW SALEM 1 S	6365	MORTON	HEART	46 50	101 25	2163	MST	6P	6P	45	45		WM F GAEBE	2 3 5
OAKES WATER WORKS	6620	DICKEY	JAMES	46 08	98 05	1318	CST	8A	8A	20	20		C M BAGEN	2 3 4 5
OMEMEE 4 SE	6703	BOTTINEAU	SOURIS	48 39	100 20		CST		MID		8		ARTHUR B VOLLMER	2 3 4
PARK RIVER	6857	WALSH	RED	48 23	97 45	998	CST	5P	5P	45	45		MARTIN SEVERSON	2 3 5
PARSHALL	6867	MOUNTRAIL	MISSOURI	47 57	102 08	1929	CST	6P	6P	17	34		C E SHUBERT	2 3 5
PEMBINA CAA	6947	PEMBINA	RED	48 57	97 15	792	CST	MID	MID	75	75		CAA	2 3 4 5
PFTERSBURO	7027	NELSON	RED	48 01	98 00	1524	CST	7P	7P	5	18		F C OVERLAND	2 3 5
PETTIBONE	7047	KIDDER	MISSOURI	47 07	99 31	1856	CST	7P	7P	40	40		L B DETHLOFF	2 3 5
PORTAL	7201	BURKE	SOURIS	49 00	102 33	1954	CST	9A	9A	35	35		U S CUSTOMS SER	2 3 5
POWERS LAKE	7281	BURKE	MISSOURI	48 34	102 39	2205	CST	5P	5P	23	44		E J LEWIS	2 3 5
PRETTY ROCK	7311	GRANT	CANNONBALL	46 11	101 51		MST		6P		8		FREDA LEER	2 3
RAUB	7405	MC LEAN	MISSOURI	47 44	102 04		CST		MID		8		ALVIN LARSON	2 3 4
RICHARDTON ABBEY	7530	STARK	REART	46 53	102 19	2467	MST	7P	7P	33	33		ASSUMPTION ABBEY	2 3 5
RIVERDALE GARRISON DAM	7585	MC LEAN	MISSOURI	47 30	101 24	1910			MID				CORPS OF ENGINEERS	2 3 4 5
ROLIA	7664	ROLETTE	PEMBINA	48 52	99 37	1860	CST	7P	7P	11	11		THEO B FAGERLUND	2 3 5
RUGBY 1 N	7704	PIERCE	SOURIS	48 23	100 00	1542	CST	9P	9P	1	20		BOYD C HAWK	2 3 5
RYDER	7749	WARD	MISSOURI	47 55	101 40	2108	CST		9A		20		S C SCHELLENBAUM	2 3
SANISR	7834	MOUNTRAIL	MISSOURI	47 59	102 32	1835	CST	7A	7A	23	23		B J BUGGE	2 3 5
SARLES 3 E	7844	CAVALIER	PEMBINA	48 55	98 56		MST		MID		8		EARLE M TRELEAVEN	2 3 4
SEARING	7944	MC KENZIE	YELLOWSTONE	47 34	103 48		MST		MID		8		GLENN S MC RAE	2 3 4
SELEFRIDGE	7952	SIOUX	MISSOURI	46 02	100 56	2183	MST		7P		12		J B SMITH	2 3
SHARON	7986	STEELE	RED	47 36	97 54	1516	CST	8P	8P	22	25		HUGH LYON	2 3 5
SHERWOOD	8047	RENVILLE	SOURIS	49 00	101 38	1647	CST			1	1		U S CUSTOMS & IMM SER	2 3
STANLEY	8276	MOUNTRAIL	MISSOURI	48 19	102 24	2258	CST	7P	7P	11	11		LEROY EDWARDS	2 3 5
STEELE	8366	KIDDER	MISSOURI	46 51	99 55	1857	CST	8P	8P	55	55		LEON V LESBER	2 3 5
TAGUS	8627	MOUNTRAIL	MISSOURI	48 20	101 56	2179	CST		6P		20		GEORGE N PILGARD	2 3
TIMMER	8727	MORTON	CANNONBALL	46 22	101 00	1742	MST		8A		11		JENNIE GIFFORD	2 3
TIOGA	8737	WILLIAMS	MISSOURI	48 24	102 56	2279	CST		6P		20		L A SIMON	2 3
TOWNER	8792	MC HENRY	SOURIS	48 21	100 24	1482	CST	7P	7P	47	47		AUGUST B RIEDER	2 3 5
TROTTERS	8807	GOLDEN VALLEY	YELLOWSTONE	47 20	103 54	2419	MST		5P		23		WALTER GRUNEWALD	2 3
TURTLE LAKE	8840	MC LEAN	MISSOURI	47 31	100 53	1899	CST	8P	8P	35	35		A S HAAS	2 3 5
TUTTLE 8 SW	8850	KIDDER	MISSOURI	47 02	100 04	1936	CST		8P		40		ADAM LENO	2 3
UNDERWOOD 11 SW	8877	MC LEAN	MISSOURI	47 25	101 22	1750	CST	6P	6P	24	37		B S SOLENBERGER	2 3 5
UPRAM WILDLIFE REFUGE	8913	MC RENRY	SOURIS	48 37	100 44	1425	CST	5P	5P	8	8		U S WILDLIFE REF	2 3 5
VALLEY CITY	8937	BARNES	SHEYENNE	46 55	98 00	1229	CST	6P	6P	44	44		MISS I C ROBERTSON	2 3 5
VAN HOOK	8970	MOUNTRAIL	MISSOURI	47 57	102 21	1864	CST	9P	9P	8	8		R GLENN SIMS	2 3 5
VELVA	8990	MC HENRY	SOURIS	48 03	100 55	1511	CST	6P	6P	22	22		OSCAR ANDERSON	2 3 5
VERONA	9035	LA MOURE	JAMES	46 22	98 04		CST		10A		8		LOUIS J MANDSON	2 3
WARPETON POWER PLANT	9095	RICKLAND	RED	46 17	96 36	962	CST		MID		8		NEWTON O JONES	2 3 4
WARPETON STATE SCROOL	9100	RICKLAND	RED	46 16	96 36	962	CST	5P	5P	57	57		STATE SCB OF SCIENCE	2 3 5
WALHALLA	9155	PEMBINA	PEMBINA	48 56	97 55	966	CST		7P		8		PETER PAULUS	2 3
WASRBURN	9195	MC LEAN	MISSOURI	47 17	101 02	1731	CST	6P	6P	46	46		FRED F JEFFERIS	2 3 5
WATFORD CITY	9233	MC KENZIE	MISSOURI	47 48	103 17	2084	CST	8P	8P	36	36		J C ZELLER	2 3 5
WESTHOPE	9333	BOTTINEAU	SOURIS	48 55	101 01	1508	CST	6P	6P	43	43		REV R CAREY	2 3 5
WILDROSE	9400	WILLIAMS	MISSOURI	48 38	103 10	2258	CST		6P		19		JONATHAN WINKJER	2 3
WILLISTON L C BRIDGE	9420	WILLIAMS	MISSOURI	48 07	103 44		CST		7A		70		U S WEATHER BUREAU	7
WILLISTON WB CITY	9425	WILLIAMS	MISSOURI	48 09	103 35	1877	CST	MID	MID		70		U S WEATHER BUREAU	2 3 4 5
WILLOW CITY	9445	BOTTINEAU	SOURIS	48 36	100 17	1471	CST	8P	8P	57	57		O M SANDERSON	2 3 5
WILTON RR STATION	9455	MC LEAN	MISSOURI	47 09	100 48	2159	CST	7:30A	8A	14	14		SOO LINE AGENT	2 3 5
WISHEK	9515	MC INTOSH	MISSOURI	46 16	99 34	2010	CST	8A	8A	28	28		B M LARSON	2 3 5

The four digit identification numbers in the index number column of the Station Index are assigned on a State basis. There will be no duplication of numbers within a State.

Delayed data and corrections will be carried only in the June and December issues of this bulletin.

Stations appearing in the Index, but for which data are not listed in the tables, are either missing or received too late for inclusion in this issue.

Data in Tables 3, 5 and 6 are for the 24 hours ending at time of observation. See the Station Index for observation time.

- No record.
- + And also on later dates.
- * Amount included in following measurement. Time distribution unknown.
- 6 Precipitation measured at 6-hourly intervals, no recording gage.
- k Total includes snow which accumulated in collar of the gage during previous period, and fell into gage for this measurement.
- m One or more days of record missing. See Table 5 for detailed daily record.
- r Station equipped with recording gage only. All amounts in Table 3 are for the non-recording gages, except for stations with this reference.
- T Trace, an amount too small to measure.
- X Daily totals are for the 24 hours ending at 1:30 A. M. CST of the following day.
- Z Hourly amounts from recording gage at the same site may be found in Table 4.
- // Gage is equipped with wind shield.

Subscription Price: 15¢ per copy; \$1.50 a year. (Yearly subscription includes Annual Summary. Correspondence regarding subscriptions should be addressed to the Weather Records Processing Center, 1300 U. S. Court House, Chicago 4, Illinois).

Table 4 data were formerly published in Hydrologic Bulletins for Ohio River and Upper Mississippi District. Amounts in this table are from recording gages. Traces are not shown.

Figures and letters following a station name indicate the distance in miles and direction from the post office of the same name.

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CLIMATOLOGICAL DATA

NORTH DAKOTA

SEPTEMBER 1948

Volume LVII No. 9



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ACKNOWLEDGMENTS

In addition to the climatological data from some 6,000 Weather Bureau and cooperative weather stations, this bulletin series contains records from Hydroclimatic Network Stations which were formerly reproduced in the Hydrologic Bulletin Series. The Hydroclimatic Network is a nationwide net of rain gages -- mostly of the recording type which produce continuous records of precipitation. It was established in 1939 at the request of the Corps of Engineers, Department of the Army, to supplement existing precipitation stations in order to provide records of rainfall intensity which were essential to the planning of flood control and related works by the Corps of Engineers. This Network, now numbering about 2,000 recording, and 1,000 non-recording rain gages, has been maintained by the Weather Bureau through working funds transferred annually to the Weather Bureau by the Corps of Engineers. These transfers averaged about \$250,000 per year between 1940 and 1944, and nearly \$375,000 since that date. For the years 1940-42, the Department of Agriculture transferred about \$100,000 per year to provide data required in its work, and since 1947 the Bureau of Reclamation has transferred about \$25,000 per year to meet the increasing needs of their program in the Western States.

Previous to the introduction of this bulletin series, data from Hydroclimatic Network stations were presented in bulletins (Hydrologic Bulletins) which were issued monthly for each of 8 drainage areas embracing the entire United States, but since the Network was established to meet the internal requirements of the Federal agencies referred to above, no provision was made for public dissemination of the data, distribution being limited to cooperating agencies and to certain public repositories. A list of locations where reference copies of the Hydrologic Bulletin Series are available for inspection may be obtained upon application to Chief, U.S. Weather Bureau, Washington 25, D.C.

Many other records published in this bulletin have been made available through the cooperation of various public offices, private agencies, and individuals as listed in the Station Index.

NORTH DAKOTA - SEPTEMBER 1948

F. J. Bavendick, Section Director - Bismarck

GENERAL SUMMARY

The month was unusually warm, making it the warmest September since 1897. At many stations it was the warmest September since records have been kept, beginning in 1892. In the southeastern, central and western parts of the state, readings of 100° or higher were recorded on the 15th and 16th which were the highest temperatures of the year. Temperatures were above the seasonal normal on all days except the period from the 6th to the 9th when the averages were slightly below normal. Frost occurred on the 7th and 9th in the northern and central sections. Sunshine averaged 20% above normal in the northern part of the state and 7% above normal in the southern part.

Precipitation averaged 0.63 inch in the eastern division, 0.11 inch in the middle division and 0.15 inch in the western division. It was the driest September since 1918 in the eastern division and the driest of record in the middle and western divisions. The wind velocity averaged slightly above normal and with no general shower periods during the month, it became quite dusty in the western sections, especially during the third decade. Many prairie fires occurred but only a few buildings were damaged by fire. No severe storms were reported.

The weather throughout the month was excellent for maturing crops, harvesting, threshing and all outdoor work. Crops for the most part were very good and much harvesting was completed. The excellent corn crop continued to develop satisfactorily. In some sections it was too dry for fall plowing. Feed was plentiful and livestock continued in good condition although pastures were dry.

TEMPERATURE

The mean temperature for the state was 63.7°, which is 6.8° above normal for the month. The monthly mean temperatures ranged from 67.5° at Elbowoods to 58.6° at Belcourt. The highest temperature recorded in the state was 105° at Amidon, Carson, Mandan, Medora and Mott, on the 15th and New England on the 16th, and the lowest 24° at Parshall on the 9th.

PRECIPITATION

The average precipitation for the state was 0.31 inch, which is 1.23 inches below normal for September. The total amounts recorded at various stations ranged from 1.54 inches at Wahpeton to no measurable precipitation at Dunn Center, Elbowoods, Mohall, Parshall, Sanish and Westhope. The heaviest rainfall reported in any one day was 1.12 inches at Wahpeton on the 21st.

PRESSURE, WIND, HUMIDITY, SUNSHINE, DEGREE DAYS

STATIONS	SEA LEVEL PRESSURE EXTREMES—INCHES				WIND				RELATIVE HUMIDITY AVERAGES				SUN- SHINE	DEGREE DAYS 65° BASE
	HIGHEST	DATE	LOWEST	DATE	AVERAGE SPEED M.P.H.	MAXIMUM SPEED M.P.H.	DIRECTION	DATE	1:30A EST	7:30A EST	1:30P EST	7:30P EST	PERCENT OF POSSIBLE	
BISMARCK AIRPORT	30.31	13	29.51	4	10.2	33	SE	26	60	73	37	37	70	99
DEVILS LAKE CITY	30.36	26	29.52	4	8.4	24	S	27	—	78	38	39	79	118
FARGO AIRPORT	30.47	26	29.58	12	12.0	34	S	4	68	80	49	49	67	97
WILLISTON CITY	30.34	30	29.49	23	6.6	22	NW	4	55	67	39	33	85	121

TABLE 1
COMPARATIVE DATA

YEAR	TEMPERATURE			PRECIPITATION			YEAR	TEMPERATURE			PRECIPITATION		
	MEAN	HIGHEST	LOWEST	AVERAGE	AVERAGE SNOWFALL	DAYS WITH .01 OR MORE		MEAN	HIGHEST	LOWEST	AVERAGE	AVERAGE SNOWFALL	DAYS WITH .01 OR MORE
1892	59.2	101	24	0.84	0	4	1927	56.8	101	10	1.00	T	3
1893	57.1	102	8	0.81	0.1	4	1928	53.9	95	12	1.00	T	5
1894	58.2	104	18	1.38	0	5	1929	52.7	105	12	1.65	0	5
1895	56.6	100	12	0.77	0	4	1930	56.2	98	10	1.02	0	4
1896	53.0	98	11	1.61	0	6	1931	61.4	107	27	2.14	T	6
1897	64.1	109	18	0.28	0	2	1932	56.8	102	22	0.63	0	3
1898	56.8	98	10	1.25	0	4	1933	60.9	101	22	0.81	0	4
1899	55.0	101	11	0.58	T	3	1934	52.4	95	9	0.96	2.0	7
1900	54.6	98	17	4.95	T	8	1935	57.2	105	16	0.43	0	3
1901	53.6	100	12	2.01	T	7	1936	60.3	102	12	1.15	T	5
1902	53.6	95	15	0.74	0	4	1937	58.6	104	20	1.47	0.1	6
1903	51.6	90	18	2.99	0.7	7	1938	61.9	99	21	0.63	0	4
1904	54.7	96	18	1.43	0	5	1939	58.9	98	11	0.68	0.2	5
1905	59.8	104	23	1.67	0	5	1940	62.8	103	20	1.06	0	4
1906	62.8	109	20	1.11	0	4	1941	55.3	94	17	4.61	0.2	11
1907	52.1	96	9	1.39	T	6	1942	54.0	99	4	1.67	2.7	9
1908	60.7	104	16	1.24	0.2	4	1943	55.6	94	19	0.51	0	4
1909	59.0	93	24	0.95	0	4	1944	56.4	91	21	1.46	T	8
1910	55.3	99	18	1.79	0.1	4	1945	54.5	103	14	2.14	0.1	9
1911	54.9	95	21	2.37	T	8	1946	56.3	97	18	2.52	T	8
1912	51.5	101	18	2.62	0	10	1947	55.5	101	13	1.45	T	7
1913	57.2	108	8	1.74	0.4	6	1948	63.7	105	24	0.31	0	2
1914	59.3	98	25	1.03	0	5	PERIOD	56.9	109	4	1.54	0.1	6
1915	54.6	104	23	2.32	0	9							
1916	55.1	99	15	1.43	T	6							
1917	56.4	97	16	1.04	0	5							
1918	51.9	93	11	0.40	T	3							
1919	58.6	100	20	0.94	0.3	5							
1920	59.0	99	19	2.21	T	8							
1921	57.0	101	25	3.21	T	12							
1922	59.8	104	23	2.10	0	6							
1923	60.1	99	15	2.51	0	6							
1924	55.0	98	20	2.09	T	7							
1925	58.1	103	20	2.67	T	8							
1926	52.3	95	9	2.30	0.5	9							

CLIMATOLOGICAL DATA

NORTH DAKOTA
SEPTEMBER 1948

Table 2-Continued

Station	Temperature								Precipitation									
	Average	Departure from Normal	Highest	Date	Lowest	Date	No. of Days		Total	Departure from Normal	Greatest Day	Date	Snow, Sleet, Hail			No. of Days		
							Max. 90° or above	Min. 32° or below					Total	Max. Depth on Ground	Date	Ol or more	25 or more	100 or more
EASTERN DIVISION																		
ARVILLA STATE PARK	63.3		98	3	36	10+	7		.71		.28	5				4	1	
BALDHILL DAM	63.3m		98	4+	31	9			.54		.33	21				4	1	
CARRINGTON	61.6m	4.7							.20	-1.22	.20	21				1		
CASSELTON	66.0	8.1	95	2+	40	9	8		1.17	-.73	.41	21				4	3	
CAVALIER POWER PLANT	64.1	8.5	96	3+	37	20	5		.01	-2.31	.01	8				1		
COOPERSTOWN	64.1	6.4	98	3	34	9	7		.63	-1.13	.50	19				2	1	
DEVILS LAKE W B CITY	63.3	7.4	97	3	36	9+	5		.27	-1.36	.14	8				3		
EDGELEY EXP FARM	65.1	6.8	100	15	37	7+	7		.69	-.97	.59	20				4	1	
EDMORE 1 W	61.6	5.2	94	3+	33	7	3		.10	-1.75	.10	14				1		
ELLEDALE NORMAL SCH	64.4	5.6	95	15	37	10	5		.85	-.83	.65	20				4	1	
FARGO WB AIRPORT	64.7	6.5	95	2	40	9+	5		.85	-1.37	.36	19				6	1	
FORMAN	66.8	7.3	99	15	40	7+	8		1.02	-1.05	.85	20				3	1	
FULLERTON	65.3	7.3	101	15	39	7+	7		.80	-1.16	.50	20				5	1	
GACKLE	64.1m	6.3	99	15	38	7	8		.85	-.73	.67	20				6	1	
GRAFTON STATE SCHOOL	63.7	6.7	95	3	39	18	5		.05	-2.11	.02	8+				3		
GRAND FORKS CAA	62.6	5.7	96	3	34	30	3		.43	-1.49	.20	14				4		
GRAND FORKS UNIVERSITY	62.2	5.3	94	4	37	20	2		.71	-1.21	.31	5				3	1	
HANKINSON R R STATION	66.0m	5.5	96	3	41	9	8		.99	-1.11	.89	21				3	1	
HANNAH	62.8m	8.0	92	3	38	28	2		.32	-1.79	.32	4				1	1	
HILLSBORO	65.0m	6.0	97	2+	40	10+	5		.68	-1.39	.25	19				5	1	
JAMESTOWN CAA	63.6	6.6	99	15	33	9	6		.74	-.93	.43	20				4	1	
JAMESTOWN STATE HOSPITAL	64.7	7.7	100	15	34	30	6		.69	-.98	.43	20				4	1	
KENSAL WILDLIFE REFUGE	59.9		94	3	31	9	3	1	.48		.35	20				4	1	
LA MOURE	65.3		98	15	37	9	7		1.17		.50	20				7	2	
LANGDON EXP FARM	62.5	9.0	97	4	34	7	6		.04	-2.19	.02	4				2		
LARIMORE	63.7	7.3	95	4	40	10	5		.84	-1.21	.48	19				4	1	
LISBON	63.2	5.1	98	16+	35	9	8		1.19	-.81	.62	21				7	1	
MAYVILLE	64.4	5.9	97	3	40	9+	6		.77	-1.29	.44	19				4	1	
MC HENRY 6 N	62.1	6.3	98	3	34	9	5		.31	-1.12	.22	14				4		
MC LEOD 3 E	64.6	5.0	96	2+	37	9+	8		1.04	-.99	.64	21				5	1	
MILNOR	65.4		98	15+	35	9	9		.99	-1.11	.65	20				3	1	
MUNICH 4 SW	61.2		94	3	34	7	2		.02		.02	4				1		
OAKES WATER WORKS	65.5	6.5	101	16	37	10	9		1.06	-.70	.74	21				4	1	
PARK RIVER	64.3	7.4	97	4	41	13+	6		.09	-2.06	.09	14				1		
PEMBINA CAA	62.0	7.5	93	4	37	30	2		.11	-2.07	.06	5				2		
PETERSBURG	62.5		95	3	35	7	4		.35	-1.62	.34	14				2	1	
SHARON	63.9m	6.5	95	3	38	7	5		.56	-1.49	.27	14				4	1	
VALLEY CITY	64.8	6.0	97	3+	36	9	7		.53	-1.26	.25	20				3	1	
WAPETON STATE SCHOOL	66.1	6.1	93	2+	39	9	9		1.54	-.68	1.12	21				6	2	1
DIVISION	63.8	6.6	101	15+	31	9			.63	-1.29	1.12	21						
MIDDLE DIVISION																		
ASHLEY	63.7m	5.8	101	16	34	7			.45	-1.02	.45	21				1	1	
BELCOURT INDIAN RES	58.6		93	3	30	7	1	1	.01		.01	8				1		
BISBEE	61.6	4.9	95	3	36	7+	4		.24	-1.45	.20	8				2		
BISMARCK WB CITY	65.5	7.4	103	15	34	28	8		.04	-1.40	.04	21				1		
BISMARCK WB AIRPORT	64.8	7.5	103	15	34	28	7		.02	-1.21	.02	20				1		
BOTTINEAU	62.9	7.4	95	3+	32	30	6	1	T	-1.59								
CARSON 2 S W	66.6	8.5	105	15	34	9	8		T									
CENTER	62.2	4.1	102	15	29	9	7	4	T	-1.36								
DRAKE	63.8	6.2	98	4+	33	9	6		.02	-1.41	.02	26				1		
DUNSEITH ST SANITARIUM	62.2m	7.2							T	-1.67								
ECKMAN	60.7	5.0	96	4	28	9	4	3	T	-1.50								
FESSENDEN	64.7	8.1	100	15	34	9	7		.16	-1.35	.08	14				2		
FORT YATES	65.7	5.5	104	15	33	7+	10		.05	-1.40	.05	20				1		
FOXHOLM WILDLIFE REF	63.9	7.7	99	3	36	30	7		T	-1.55								
GARRISON	63.7	7.8	101	15	32	9	5	1	T	-1.46								
GRANVILLE	62.7	6.8	98	3	31	9	4	1	.02	-1.54	.02	7				1		
HANSBORO	60.6m	6.4							.19	-1.67	.17	4				2		
LEEDS	64.3		100	3	34	9+	6		.44		.38	14				3	1	
LINTON	66.6	6.8	102	15	34	7	8		.09	-1.48	.07	20				2		
MADDOCK AGR SCHOOL	63.6	6.7	97	3	31	9	7	1	.05	-1.61	.05	8				1		
MANDAN EXP STATION	65.5	6.9	103	16	35	28	8		.01	-1.45	.01	21				1		
MANDAN FT LINCOLN PARK	66.3		105	15	35	9	10		T									
MAX	62.6m	6.0	98	4			5		.08	-1.31	.08	5				1		
MC CLUSKY	64.5	7.3	101	16	35	9	7		.04	-1.33	.04	20				1		
MINOT CAA	63.4	7.0	98	3	34	9	5		.01	-1.59	.01	7				1		
MINOT EXP FARM	62.6		98	3	31	9	5	1	T									
MOHALL	61.6	6.7	96	3	30	9	5	1	.00	-1.56						2	1	
NAPOLEON 2 SE	63.8	6.3	99	15	37	7	6		.65	-.81	.48	20				4		
NEW SALEM 1 S	66.5	8.2	104	15	38	9	8		.25	-1.06	.12	7				4		
PETTIBONE	63.1	6.5	101	15	31	9	6	1	.52	-.82	.29	19				4	1	
RIVERDALE	67.0		102	15	38	9	9		T							1		
ROLLA	60.1	5.0	92	3	39	9	1		.05	-1.70	.05	4				2		
RUGBY 1 N	62.9		96	3	29	9	4	1	.39	-1.29	.34	4				3	1	
STEELE	63.9	6.2	101	15	35	7	6		.45	-1.08	.34	20						
TURTLE LAKE	64.5	7.0	100	15	32	9	7	1	T	-1.27								
UNDERWOOD 12 W	62.8	4.6	102	15	31	7	6	3	T	-1.40								
UPHAM WILDLIFE REFUGE	62.6m		97	3			7		.06		.05	8				2		
VELVA	63.1	5.9	97	3	33	9	4		.03	-1.53	.03	4				1		
WASHBURN	65.7	6.4	101	15	37	9	7		T	-1.27								
WESTHOPE	61.9	6.3	95	3	31	9	5	1	.00	-1.45								
WILLOW CITY	62.2	7.5	96	3	31	28	5	2		-1.65						1		
WILTON RR STATION	62.9m	5.6	99	16	37	9	7		.05	-1.20	.05	21				2		
WISHEK	62.4	5.2	100	16	27	22	8	3	.22	-1.23	.21	21						

See reference notes following Station Index.

CLIMATOLOGICAL DATA

NORTH DAKOTA
SEPTEMBER 1948

Table 2-Continued

Station	Temperature								Precipitation									
	Average	Departure from Normal	Highest	Date	Lowest	Date	No. of Days		Total	Departure from Normal	Greatest Day	Date	Snow, Sleet, Hail			No. of Days		
							Max. 90° or above	Min. 32° or below					Total	Max. Depth on Ground	Date	.01 or more	.25 or more	1.00 or more
DIVISION	63.5	6.5	105	15	27	22			.11	-1.34	.48	20						
WESTERN DIVISION																		
ALMONT 7 SW	66.6		104	15	35	9	6		.26		.16	8					4	
AMIDON	65.5	7.1	105	15	35	9+	7		.33	-1.14	.15	7					4	
BOWBELLS R R STATION	61.0	6.4	97	4+	29	9+	6	3	T	-1.41								
BOWMAN COURT HOUSE	65.9	8.1	102	15	39	7+	8		.31	-.96	.15	8					3	
CROSBY	60.0	5.2	101	4+	27	8	5	4	.22	-1.02	.10	8					4	
DICKINSON CAA	63.7	7.3	102	15	35	9	6		.20	-1.10	.17	7					2	
DICKINSON EXP STATION	62.8	6.4	104	16	29	9+	6	2	.22	-1.08	.16	8					3	
DUNN CENTER	62.7m	6.2							.00	-1.40								
ELBOWOODS	67.5m	10.0	100	2	32	7	6	1	.00	-1.49								
EPPING	64.3	7.5	102	3+	28	9	7	2	.01	-1.28	.01	7					1	
GRENORA	65.8	10.5	100	3+	28	30	8	2	.07	-1.16	.07	27					1	
HETTINGER	65.1m	6.5	104	15	32	28	8	1	.09	-1.21	.06	20					2	
KENMARE	63.9	7.7	97	3	33	30	5		.06	-1.51	.04	8					2	
MARMARTH	63.5	5.7							.52	-.74	.30	7					3	1
MEDORA T R N M P	62.9		105	15	27	28	8	3	.20		.14	7					3	
MOTT RR STATION	64.2	6.4	105	15	32	28	7	1	.53	-.84	.31	8					3	1
NEW ENGLAND	64.6	7.2	105	16	33	28	7		.14	-1.23	.10	8					2	
PARSHALL	62.7	7.4	100	3	24	9	6	4	.00	-1.49								
PORTAL	61.0	5.8	98	9	26	30	5	3	.18	-1.28	.07	8					5	
RICHARDTON ABBEY	65.6	7.4	103	15	38	9	7		.20	-1.12	.16	20					2	
SANISH	62.7	5.2	101	4	29	9	6	2	.00	-1.34								
STANLEY	61.4		98	3+	28	9	5	2	T	-1.37								
WATFORD CITY	64.7	7.0	103	15	30	9	6	1	.09	-1.22	.09	24					1	
WILLISTON WB CITY	63.2	6.6	101	3	30	9	5	1	.02	-1.07	.01	7+					2	
DIVISION	63.8	7.0	105	15+	24	9			.15	-1.12	.31	8						
STATE	63.7	6.8	105	15+	24	9			.31	-1.23	1.12	21					2	

See reference notes following Station Index.

NORTH DAKOTA
SEPTEMBER 1948

Day of Month

See reference notes following Station Index.

DAILY PRECIPITATION

NORTH DAKOTA

SEPTEMBER 1949

Table 3-Continued

Station	Day of Month																															Total				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
RYDER																																	T	0.00		
SANISH																																	T	0.03		
SARLES 3 E R //				.03																														0.56		
SILARON					.04									.27					.13		.12												0.33			
SHERWOOD							.28	.05																									T	0.00		
STANLEY																																	T	0.45		
STEELE							T													.34	.09	.02	T		T							T	T	0.00		
TAGUS							T	T																										T	0.00	
TIOGA								-																										T	0.00	
TOWNER																																			0.00	
TROTTERS							T	T																										T	0.01	
TURTLE LAKE					T		T	T																										T	0.01	
TUTTLE 8 SW							T	T												T	.08	.08												T	0.21	
UNDERWOOD 12 W																			.05	T													T	0.06		
UPHAM WILDLIFE REFUGE								.01	.05																									T	0.06	
VALLEY CITY				T																.18	.25	.10												0.53		
VAN HOOK																																			0.00	
VELVA				.03																															0.03	
VERONA					.52				.20											.12		.50												T	1.34	
WAHPETON POWER PLANT R									.03						.19					.02	.52	.07												0.83		
WAHPETON STATE SCHOOL					.02	.32		.02						.03						.03	T	1.12												1.54		
WALHALLA			T																															T	0.09	
WASHBURN																																			T	0.09
WATFORD CITY																																			0.00	
WESTHOPE																																			0.05	
WILDROSE							T	.01																										0.05		
WILLISTON L C BRIDGE								.01																											0.02	
WILLISTON WB CITY R								.01																											0.02	
WILLOW CITY							T		T																										T	0.05
WILTON RR STATION																																			0.05	
WISHEK									.01													.21	T											0.22		

See reference notes following Station Index.

TABLE 4

HOURLY PRECIPITATION

NORTH DAKOTA
SEPTEMBER 1948

STATION	A. M. HOUR ENDING												P. M. HOUR ENDING												TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
-4th-																									
DEVILS LAKE W B CITY				.01																					.01
SARLES 3 E	//						.02		.01																.03
-5th-																									
EDGELEY EXP FARM			.03																						.03
FARGO WB AIRPORT	//												.01							.03					.01
GLEN ULLIN																									.03
GRAND FORKS CAA	//		.09	.01																					.10
PEMBINA CAA	//		.05																						.05
-7th-																									
BOWMAN COURT HOUSE	//									.02	.06					.10	.01		.02						.21
DICKINSON CAA										.07	.10														.17
GRAND	//														.01	.02	.02								.05
KRAMER 5 SE																.03	.03								.06
MINOT CAA	//														.01										.01
MOTT RR STATION	-	-	-	-	-	-	-	-	-	-	-	-	.01	-	-	-	-	-	-	-	-	-	-	-	-
WILLISTON WB CITY																									.01
-8th-																									
DEVILS LAKE W B CITY																		.14							.14
DICKINSON CAA		.03																							.03
EDGELEY EXP FARM				.05																					.05
FARGO WB AIRPORT	//					.01																			.01
JAMESTOWN CAA	//																.02								.02
OAKES WATER WORKS																			.04		.02				.04
PEMBINA CAA	//						.01																.03		.06
WABPETON POWER PLANT										.01	.01	.01													.03
-10th-																									
PEMBINA CAA	//															.01	.01								.02
-14th-																									
DEVILS LAKE W B CITY			.12																						.12
FARGO WB AIRPORT	//				.05	.05	.10																		.20
GRAND FORKS CAA	//				.09	.06	.05																		.20
HANNAFORD		.03	.10		.01																				.14
JAMESTOWN CAA	//				.06																				.06
WABPETON POWER PLANT				.01	.08	.10																			.19
-18th-																									
MOTT RR STATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
OAKES WATER WORKS																							.10		.10
-19th-																									
DAWSON		.19	.01																						.20
EDGELEY EXP FARM	-	-	-	-																					
FARGO WB AIRPORT	//				.08	.13	.01	.14																	.36
GRAND FORKS CAA	//			.03	.07		.01																		.11
HANNAFORD			.02	.06	.02																				.10
HAZELTON R R STATION	//	.01													.03	.02		.01							.09
JAMESTOWN CAA	//	.01		.06	.05	.10		.05																	.27
OAKES WATER WORKS		.07	.02	.01													.01	.01						.01	.13
WABPETON POWER PLANT							.01		.01																.02
-20th-																									
BISMARCK WB AIRPORT																.02									.02
BOWMAN COURT HOUSE	//						.01	.02	.05	.01												.02	.01		.09
DAWSON																.13	.14								.30
DICKINSON CAA												.01		.01											.02
EDGELEY EXP FARM														.03	.23	.27	.05								.58
FARGO WB AIRPORT	//																.01	.02	.02	.19					.24
GLEN ULLIN																	.01	.01	.01		.06	.01			.10
GRAND FORKS CAA	//																								.01
HANNAFORD																							.01		.23
JAMESTOWN CAA	//									.02							.04	.15	.01			.01			.42
MOTT RR STATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
OAKES WATER WORKS		.01															.15	.45	.02					.01	.64
WABPETON POWER PLANT																	.29	.20	.02		.01				.52
-21st-																									
FARGO WB AIRPORT	//			.01	.01		.01																		.03
JAMESTOWN CAA	//		.01																						.01
OAKES WATER WORKS		.02		.05		.02	.02				.01	.01													.09
WABPETON POWER PLANT		.02			.02	.01																			.07
-24th-																									
WILLISTON WB CITY				.01																					.01
-29th-																									
BOWMAN COURT HOUSE	//																			.04	.02				.06

SEE REFERENCE NOTES FOLLOWING STATION INDEX

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ALMONT 7 SW	MAX MIN	96 53	97 58	100 64	87 67	85 45	76 50	71 39	69 40	69 35	88	95 54	81 54	83 49	98 60	104 54	88 53	86 55	89 52	79 52	63 52	78 46	71 49	73 53	73 57	76 55	82 55	75 52	80 38	85 50	68 43	82.1 51.0	
AMIDON	MAX MIN	95 56	93 54	99 55	94 55	78 47	70 48	65 37	67 37	68 35	84 47	89 49	81 50	84 52	100 54	105 65	95 60	81 56	87 54	80 52	65 46	82 44	82 45	81 53	74 45	77 48	85 51	78 57	79 37	78 44	67 35	82.1 48.9	
ARVILLA STATE PARK	MAX MIN	91 48	95 55	98 55	95 61	88 59	75 45	73 49	69 37	65 32	85 49	94 50	90 48	92 49	85 48	85 46	87 54	80 50	84 36	77 57	74 43	63 61	71 42	69 71	76 52	76 46	79 47	83 39	83 36	69 45	80.4 46.1		
ASHLEY	MAX MIN	93 46	93 56	95 63	95 64	96 61		80 34	73 44	70 34	67 36	86 49	94 36		79 53	99 51	101 52	89 53	82 39	85 41	75 44	65 44	69 51	60 51	60 51	65 52	73 47	75 46	79 37	80 37	79 42	80.4 46.9	
BALDHILL DAM	MAX MIN	92 47	92 56	96 51	98 65			75 33	73 43	68 31	88 37			82 34	85 50	98 47	90 55	84 36				73 39	62 48	60 50	67 45	69 50		76 47	79 35	84 46	82 40	80.4 46.9	
BELCOURT INDIAN RES	MAX MIN	86 42	86 45	93 47	86 60	75 46	67 39	66 30	61 36	62 33	85 36	87 45	67 47	71 36	73 47	85 46	80 54	75 47	82 33	73 54	67 36	68 38	59 46	64 48	65 54	76 52	80 50	71 38	74 33	81 36	64 36	74.3 43.0	
BISBEE	MAX MIN	90 48	88 53	95 64	90 70	79 55	70 50	70 38	63 43	65 42	86 47	90 50	71 57	76 43	73 56	86 53	82 56	76 58	85 44	73 57	75 40	73 53	66 45	67 54	68 56	78 58	81 57	78 55	77 34	77 45	62 46	59 46	76.4 50.9
BISMARCK WB CITY	MAX MIN	93 48	97 53	97 64	93 70	82 55	72 50	69 38	67 43	70 42	90 47	95 50	78 57	80 43	94 56	103 53	85 56	84 58	85 44	78 57	65 40	74 53	62 45	64 54	68 56	79 58	82 57	71 55	81 34	85 45	63 46	80.2 50.9	
BISMARCK WB AIRPORT	MAX MIN	92 45	97 53	100 60	97 65	83 54	72 46	71 36	69 38	89 37	99 43	97 48	77 51	81 42	95 53	103 51	86 55	84 52	88 44	77 55	65 46	72 51	67 48	64 54	69 59	77 59	83 57	77 45	80 34	84 42	63 41	80.9 48.8	
BOTTINEAU	MAX MIN	89 51	90 47	95 59	95 63	82 50	75 45	68 33	63 35	64 34	89 43	90 47	75 51	76 39	90 55	90 50	78 56	84 54	78 41	70 52	70 45	67 46	67 48	68 52	78 55	83 56	81 52	77 51	77 33	82 50	64 32	78.3 47.5	
BOTTINEAU STATE PARK	MAX MIN	85 49	89 47	92 49	89 51	88 55	77 32	65 31	60 30	64 31	86 41	88										65 41	67 51	66 53	74 58	69 51	71 						

DAILY TEMPERATURES

NORTH DAKOTA
SEPTEMBER 1948

Table 5--Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
GACKLE	MAX		94	94	95	91	72	70	68	64	84	92	77	88	92	99	97	81	84	82	67	62	58	63	65	73	74	78	78	78	74		79.1
	MIN		52	60	59	60	48	38	51	38	44	52	54	42	55	48	56	60	44	57	40	50	50	51	47	48	46	47	39	46	43		49.1
GARRISON	MAX	94	94	100	86	81	73	68	69	69	87	95	75	79	88	101	81	80	87	77	76	71	70	71	76	83	75	80	83	60		80.0	
	MIN	46	52	52	64	47	40	35	37	32	45	50	50	40	48	51	53	54	46	55	46	47	49	52	58	55	46	37	45	39		47.5	
GRAFTON STATE SCHOOL	MAX	91	91	95	94	93	81	71	70	65	82	85	84	72	74	80	84	81	81	79	75	69	62	70	70	77	78	79	82	78		78.8	
	MIN	51	57	50	60	59	50	42	41	43	40	55	53	41	53	49	56	50	39	57	41	49	52	43	52	51	47	48	42	41	49		48.7
GRAND FORKS CAA	MAX	89	91	96	94	78	74	71	66	65	82	87	74	75	75	82	83	80	82	75	73	56	63	70	71	75	76	77	80	80	60	76.7	
	MIN	53	58	53	64	57	48	41	44	43	40	54	48	44	54	52	62	51	41	48	36	49	51	44	52	52	47	49	43	44	34	48.5	
GRAND FORKS UNIVERSITY	MAX	87	88	93	94	86	73	71	67	64	76	86	73	74	74	81	83	79	79	75	72	56	62	69	70	73	75	76	77	80	60	75.8	
	MIN	52	52	53	63	60	50	40	42	42	40	53	51	43	53	51	60	55	41	52	37	49	51	44	52	51	47	48	43	44	40	48.6	
GRANVILLE	MAX	90	89	98	87	79	70	69	65	65	87	93	71	79	79	96	84	83	85	75	72	73	72	75	70	81	85	72	79	83	71	79.2	
	MIN	40	49	49	56	47	43	35	35	31	42	51	41	39	39	50	50	57	44	54	54	36	45	46	52	57	52	57	54	37	41	46.2	
GRENORA	MAX	94	95	100	98	80	72	73	71	69	90	95	80	85	88	100	97	80	83	80	76	85	84	80	78	78	81	79	78	74	70	83.1	
	MIN	67	65	64	56	45	42	43	46	29	53	53	46	42	46	55	51	49	57	56	44	42	53	50	45	43	48	50	41	48	28	48.6	
HANKINSON R R STATION	MAX	89	90	96	94	91	82	75	74	73	67	80	95	82	78	93	93	92	89	85	74	71	56	63	68	75		81	76	81	80	80.8	
	MIN	56	59	56	59	67	62	43	45	41	42	50	61	46	51	52	61	66	51	56	46	52	50	45	47	48		46	43	44	42	51.3	
HANNAH	MAX	87	86	92	90	79	76		70	80	84	82	71	78	81	83	80	74	80	76	71	68	68	69	77	78	70	78	77	84	68	77.8	
	MIN	51	58	56	61	51	44		42	43	52	46	39	48	46	51	52	48	41	53	39	45	46	54	53	50	50	44	38	42	43	47.8	
HANSBORO	MAX	88	87	94	89	77	73	71	69	69	86	88	71	73		84	84	78		81	70	72	60	67	67	76	80	78	77	84	59	76.9	
	MIN	48	52	48	61	48	40	35	39	33	40	50	46	39		45	55	44		39	32	39	48	47	53	52	49	47	40	38	36	44.4	
HETTINGER	MAX	92	97																														
	MIN	42	49		56	49	52	35	36	33	38	45	45	44	52	55	53	60	52	86	67	84	80	79	70	75	84	80	80	84	77	83.3	
HILLSBORO	MAX	92	97	97	95	86	76	75	71	64	80	94	87	79	79	89	85	82	84	76	73	60	70	71	75	77	78	81	81		62	79.9	
	MIN	57	56	55	60	62	53	41	45	41	40	57	52	45	54	51	62	65	45	56	40	50	42	53	47	46	48	44	44		43	50.1	
JAMESTOWN CAA	MAX	92	94	97	97	82	70	72	69	67	87	95	78	80	87	99	88	84	86	77	69	61	60	67	69	74	77	80	80	80	64	79.4	
	MIN	49	54	56	64	61	45	36	44	33	38	54	46	39	56	48	55	52	41	53	39	51	51	50	54	54	46	48	39	42	38	47.9	
JAMESTOWN STATE HOSP	MAX	93	96	98	98	88	72	73	69	66	87	96	80	80	89	100	89	84	86	75	68	60	61	67	68	74	76	79	80	80	67	80.0	
	MIN	51	56	57	55	62	49	38	46	36	38	55	55	39	57	49	59	63	44	59	41	51	52	50	58	53	46	49	39	43	34	49.5	
KENMARE	MAX	89	93	97	96	84	83	74	73	69	71	89	91	77	78	78	93	86	80	83	78	69	75	73	75	62	77	83	72	80	79	80.2	
	MIN	54	50	57	52	61	43	43	37	36	45	52	46	41	46	50	52	43	49	51	44	46	47	52	54	46	50	58	44	49	33	47.7	
KENSAL WILDLIFE REFUGE	MAX	89	88	94	86	70	68	65	61	58	84	90	76	78	69	93	82	76	74	75	70	58	56	62	64	64	74	76	78	78	59	73.8	
	MIN	45	52	51	59	56	42	34	33	31	38	54	50	36	55	48	53	56	37	55	37	49	50	49	53	53	46	45	35	41	41	46.1	
LA MOURE	MAX	94	97	95	94	85	72	73	70	67	85	93	80	80	95	98	87	86	85	77	70	60	60	70	69	74	75	77	81	80	65	79.8	
	MIN	49	57	57	71	62	50	39	50	37	40	56	57	39	56	53	56	61	42	61	46	51	52	50	52	51	49	50	44	44	41	50.8	
LANGDON EXP FARM	MAX	91	92	95	97	90	71	72	64	68	84	90	82	76	74	78	89	81	83	79	73	71	58	67	71	77	74	78	80	83	73	78.7	
	MIN	48	51	58	64	49	42	34	38	35	40	47	48	36	46	48	55	48	39	53	38	45	50	45	53	52	50	52	40	47	37	46.3	
LARIMORE	MAX	90	94	93	95	85	74	72	69	65	83	92	75	76	75	84	85	79	82	82	73	62	60	68	70	75	77	78	81	81	66	78.0	
	MIN	54	59	54	63	59	53	41	45	42	40	57	53	45	51	48	55	57	44	45	41	49	52	45	53	54	41	47	45	46	48	49.5	
LEEDS	MAX	95	97	100	96	84	73	72	71	67	88	96	83	81	77	92	85	80	87	77	76	74	63	68	69	78	81	79	81	86	64	80.7	
	MIN	48	54	58	64	53	42	41	39	34	43	51	49	39	50	50	54	52	37	57	34	51	51	51	56	55							

DAILY TEMPERATURES

NORTH DAKOTA
SEPTEMBER 1948

Table 5-Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
NAPOLEON 2 SE	MAX MIN	89 50	94 56	94 63	97 65	79 60	67 47	70 37	67 43	65 38	86 41	93 50	76 55	77 40	92 59	99 48	88 54	82 55	84 43	71 55	65 38	66 52	61 50	63 51	66 55	74 54	75 51	78 51	77 41	78 46	61 48	77.8 49.9	
NEW ENGLAND	MAX MIN	88 45	96 51	97 50	98 51	87 45	78 52	76 37	67 48	72 35	70 42	88 44	93 48	78 40	83 47	98 50	105 49	79 57	81 56	90 50	80 52	59 40	85 43	82 50	81 55	64 53	76 53	82 55	75 33	80 38	84 39	82.4 46.9	
NEW SALEM 1 S	MAX MIN	96 58	99 59	99 62	90 60	80 51	73 50	70 40	70 39	75 38	90 52	96 58	80 57	81 45	96 57	104 47	88 52	82 57	89 49	77 53	67 49	76 48	75 49	63 52	75 53	77 56	81 52	80 47	78 42	85 46	79 42	82.4 50.7	
OAKES WATER WORKS	MAX MIN	96 52	93 55	95 56	96 59	99 63	80 53	71 40	75 44	75 41	69 37	86 44	95 50	84 42	83 48	99 50	101 55	92 46	88 45	87 46	76 45	67 47	66 53	61 52	69 59	69 46	76 45	77 46	78 46	81 42	82 42	82.2 48.9	
PARK RIVER	MAX MIN	91 55	92 58	96 52	97 59	90 58	74 50	74 42	69 43	65 42	84 45	90 58	86 55	75 41	74 51	82 47	85 55	79 55	83 42	78 61	73 42	67 50	60 52	70 41	71 53	76 54	79 42	80 41	80 47	84 42	76 48	79.3 49.4	
PARSHALL	MAX MIN	94 39	92 64	100 50	90 62	80 38	70 43	64 37	66 42	67 24	88 43	94 41	82 55	81 42	85 48	98 50	83 60	77 51	87 42	76 48	71 42	76 45	75 53	75 45	68 55	77 55	83 50	78 51	79 39	80 45	66 37	80.1 45.3	
PEMBINA CAA	MAX MIN	89 57	89 56	92 52	93 64	79 54	70 49	67 44	60 43	61 44	80 41	84 55	70 48	71 42	71 55	79 50	83 60	74 51	78 42	76 48	70 42	62 45	61 53	71 45	70 55	78 55	76 50	77 51	79 39	80 45	57 37	74.9 49.1	
PETERSBURG	MAX MIN	89 51	90 56	95 65	93 67	79 56	70 47	69 35	67 42	64 37	81 44	91 52	71 49	76 40	73 58	71 57	83 55	75 48	82 56	74 42	60 48	57 50	67 48	69 51	74 52	77 47	78 51	80 42	82 47	58 46	75.6 49.5		
PETTIBONE	MAX MIN	92 49	94 52	96 61	97 64	86 53	73 43	71 33	66 38	67 31	86 38	94 45	82 45	80 43	87 46	101 46	87 57	81 46	87 42	78 51	70 38	68 49	59 49	63 51	61 56	75 51	72 51	77 52	80 41	81 44	64 44	79.2 47.0	
PORTAL	MAX MIN	85 49	93 45	92 47	98 52	82 40	79 38	67 30	68 30	63 29	68 50	89 51	93 41	71 42	78 45	78 50	96 42	80 37	73 49	80 43	76 41	72 41	79 46	74 51	80 50	60 47	75 51	83 56	67 38	78 47	71 26	78.3 43.7	
POWERS LAKE	MAX MIN	92 45	93 46	94 56	92 55	81 50																											
RICHARDTON ABBEY	MAX MIN	94 50	93 55	98 58	89 51	79 50	73 39	65 39	69 38	67 46	87 54	91 55	83 46	82 54	97 50	103 55	92 55	79 54	89 52	79 56	68 45	80 47	77 51	76 55	71 55	76 54	81 52	75 53	80 39	84 47	72 40	81.6 49.6	
RIVERDALE	MAX MIN	92 52	94 61	94 59	98 63	86 49	76 51	73 40	66 40	67 38	67 40	95 55	91 46	86 46	92 58	102 53	101 57	89 58	88 51	87 58	73 48	75 48	74 49	78 53	70 57	76 55	82 56	77 54	79 40	83 59	77 41	82.9 51.2	
ROLLA	MAX MIN	87 52	86 55	92 60	87 67	76 53	68 45	67 41	62 39	64 46	73 46	86 51	68 47	72 45	70 48	83 57	81 42	75 49	81 48	90 40	79 43	67 44	69 48	59 44	63 48	64 51	75 50	79 46	74 41	61 47	61 40	73.2 47.1	
RUGBY 1 N	MAX MIN	89 57	90 50	96 52	89 63	77 52	68 42	68 34	65 35	63 29	88 44	92 48	72 42	77 39	75 57	91 53	80 52	78 53	85 41	75 53	74 37	71 49	67 50	68 52	73 55	78 59	82 55	78 58	77 38	84 45	71 40	78.0 47.8	
SANISH	MAX MIN	86 42	97 43	94 48	101 50	84 46	80 44	71 37	65 35	67 29	67 29	88 44	95 44	71 36	82 39	85 46	98 51	80 56	80 56	90 48	79 48	73 42	80 42	78 50	82 58	65 52	78 52	86 58	72 33	81 33	80 38	81.2 44.3	
SHARON	MAX MIN	90 54	94 59	95 61	93 64	84 59	73 53	75 38	70 41	62 39	84 40	93 53	76 57	77 42	85 53	88 48	85 55	80 60	82 48	75 56	70 41	55 48		65 43	66 45	67 50	74 52	75 48	77 43	83 48	81 48	78.1 49.7	
STANLEY	MAX MIN	93 45	92 46	98 47	74 43	79 47	78 42	64 36	66 36	68 28	87 47	92 46	72 44	79 36	80 44	98 48	87 51	89 47	85 47	87 49	79 42	76 36	74 44	78 50	62 52	76 52	83 47	69 37	78 42	77 31	68 42	79.6 43.3	
STEELE	MAX MIN	89 51	93 50	96 55	97 67	80 54	70 45	71 35	69 45	66 37	87 42	93 37	79 42	79 49	91 50	101 55	84 49	80 58	86 55	74 53	67 43	76 50	63 53	63 67	67 57	75 55	78 54	76 40	78 81	61 45	79.0 48.9		
TURTLE LAKE	MAX MIN	93 47	94 56	97 53	92 67	81 47	73 45	70 35	67 37	67 32	87 47	95 50	82 40	80 51	90 52	100 51	83 58	80 58	85 56	79 40	70 51	73 48	71 51	66 56	72 53	77 57	82 53	75 45	80 31	83 41	67 40	80.4 48.7	
UNDERWOOD 12 W	MAX MIN	96 41	93 49	101 48	87 57	79 43	72 42	67 31	69 32	67 32	88 40	96 44	75 44	82 36	92 51	102 49	80 54	81 49	88 44	79 44	68 44	77 45	77 43	70 53	72 53	78 57	84 53	76 45	81 31	86 41	68 40	81.0 44.7	
UPHAM WILDLIFE REFUGE	MAX MIN	91 30	90 46	97 36	93 67	83 48	73 38	71 31	65 35	66 29	90 43	94 46	86 37	81 51	80 50	91 60	80 41	77 41	86 69	75 41	74 38	78 44	74 47	69 53	69 56	80 55	85 50	72 51	80 35	84 43	72 36	80.2 45.0	
VALLEY CITY	MAX MIN	92 50	95 55	97 53	95 66	90 62	75 51	72 38	70 49	65 36	86 37	95 55	82 39	79 51	86 50	97 54	86 60	83 43	84 58	83 46	72 49	72 49	60 49	67 50	70 52	75 46	76 50	78 47	80 41	81 40	70 42	80.4 49.2	
VAN HOOK	MAX MIN										70 32	69 29	89 46	94 47	75 49	82 37	87 45	100 50	84 52	79 50	88 49	78 49	72 42	78 49	77 53	80 59	66 52	78 52	86 57	54 33	45 35		46.4
VELVA	MAX MIN	90 47	88 51	97 48	89 68	78 49	73 46	65 37	65 38	64 33	86 44	93 50	81 49	78 40	80 51	95 57	78 48	76 57	85 43	74 56	68 49	74 48	72 46	68 56	70 54	79 55	83 59	78 57	79 39	82 43	69 40	78.6 47.7	
WAHPETON STATE SCHOOL	MAX MIN	89 56	93 59	92 57	92 61	87 68	76 60	72 42	72 51	69 39	79 43	93 43	92 56	78 42	92 42	93 55	93 67	90 67	85 47	84 61	72 45	68 51	67 52	68 46	70 53	74 49	75 47	81 47	79 47	75 41	80.8 51.4		
WASHBURN	MAX MIN	92 50	93 59	96 62	92 69	81 50	73 50	69 39	68 42	67 37	89 48	95 50	84 43	79 55	91 53	101 55	84 61	79 59	85 75	75 44	72 50	68 51	65 51	63 59	71 58	75 57	81 57	74 55	80 40	83 49	75 44	80.3 51.1	
WATFORD CITY	MAX MIN	95 47	96 47	100 57	84 55																												

TABLE 6

DAILY EVAPORATION (INCHES) AND WIND MOVEMENT (MILES)

NORTH DAKOTA
SEPTEMBER 1948

STATION		DAY OF MONTH																															TOTAL	DEPART URE FROM NORMAL
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
MANDAN EXP STATION	EVAP	.336	.254	.231	.348	.318	.275	.154	.140	.113	.137	.183	.229	.198	.208	.204	.228	.169	.263	.198	.161	.036	.112	.101	.134	.132	.223	.316	.156	.119	.223	5.899		
	WIND	121	60	54	215	137	105	51	59	50	33	72	74	72	137	114	89	92	93	97	98	31	80	245	194	190	235	301	105	25	94	3323		
DICKINSON EXP STATION	EVAP	.380	.280	.240	.310	.290	.280	.162	.133	.138	.098	.180	.260	.185	.284	.228	.304	.218	.255	.216	.170	.087	.128	.205	.200	.065	.240	.350	.070	.170	.085	6.211		
	WIND	110	65	45	110	90	70	60	65	50	45	65	75	60	170	69	71	127	35	103	80	45	15	305	225	85	200	255	85	60	105	2945		

TABLE 7

DAILY RIVER STAGES (FEET)

RIVER AND STATION	FLOOD STAGE	DAY OF MONTH																															HIGHEST (OR CREST) DATE	LOWEST DATE
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
MISSOURI BISMARCK WATER WORKS WILLISTON L C BRIDGE	19	7.9	7.9	7.9	7.9	7.8	7.7	7.7	7.7	7.8	7.9	7.8	7.7	7.6	7.6	7.7	7.7	7.7	7.8	7.9	8.1	8.2	8.2	8.2	8.1	8.1	8.2	8.6	9.1	9.0	9.1029	7.6	14	
	20	6.7	6.5	6.5	6.3	6.3	6.3	6.4	6.3	6.2	6.1	6.1	6.1	6.2	6.2	6.2	6.3	6.4	6.5	6.5	6.4	6.4	6.4	6.3	6.4	6.6	6.9	6.7	6.6	6.5	6.4	6.9026	6.1	10

Readings are made at approximately 7 A. M. (local time). They are provisional and subject to correction. Final and corrected stages will be published in the annual publication "Daily River Stages - Principal Rivers of the United States." The following reference notes apply only to Table 7, Daily River Stages:

a Obstructed by rough ice.
b Frozen but open at gage.
c Upper surface of smooth ice.
d Ice gorge above gage.
e Ice gorge below gage.

f Shore ice.
g Floating ice.
h Pool stage.
i Dry at gage.
j Interpolated.

STATION INDEX

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT.	LONG.	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
ADAMS 7 S	0D22	WALSH	RED	48 20	98 06		CST		7A				MYRA J SOTA	3
ALFANDER RR STATION	0096	MC KENZIE	YELLOWSTONE	47 50	103 38	120D	MST		8A		8		ARTHUR J BAUMAN	3
ALMONT 7 W	0136	MORTON	HEART	46 43	101 39	2300	MST	7P	7P	6	6		HOGAN RAMSLAND	2 3 5
ALPHA 1 S	0149	GOLDEN VALLEY	LIT MISSOURI	46 37	103 49		MST		7P	23	23		R A BURY	3
AMIDON	0209	SLOPE	CANNONBALL	46 29	103 19	29D8	MST	5P	5P	27	27		STANLEY W SOLE	2 3 5
ARVILLA STATE PARK	0369	GRAND FORKS	RED	47 56	97 30	960	CST	6P	6P	5	5		ALBERT THOREN	2 3 5
ASHLEY	0382	MC INTOSH	MISSOURI	46 02	99 22	2025	CST	8A	8A	53	53		W E DREY	2 3 4 5
BALDILL DAM	0450	BARNES	SHEYENNE	47 02	98 D5	13D0	CST	8A	8A	1	1		F A JOHNSON	2 3 5
BALFOUR RR STATION	D492	MC HENRY	SOURIS	47 57	10D 32		CST						C G THOMSON	3 4
BELLCOURT INDIAN RES	0626	ROLETTE	PEMBINA	48 50	99 45	196D	CST	7P	7P	4	4		TURTLE MT INDIAN AG	2 3 5
BELFIELD	0639	STARK	HEART	46 52	103 11	2592	MST	7P	7P	31	31		CARL INDERGAARD	2 3 5
BEULAH	0766	MERCER	KNIFE	47 16	101 47	1780	MST		7P		34		KNIFE RIVER COAL MNG	3
BISBEE	D796	TOWNER	DEVILS LAKE	48 37	99 22	1601	CST	6P	6P	46	46		ROBERT L PETERSON	2 3 5
BISMARCK WATER WORKS	D809	BURLEIGH	MISSOURI	46 49	10D 49	1628	CST	7A	7A				BISMARCK WATER PLANT	3
BISMARCK WB CITY	0814	BURLEIGH	MISSOURI	46 48	100 48	167D	CST	1DA	10A	74	74		U S WEATHER BUREAU	2 3 5
BISMARCK WB AIRPORT	D819	BURLEIGH	MISSOURI	46 46	10D 45	1650	CST	MID	MID	9	9		U S WEATHER BUREAU	2 3 4 5
BOTTINEAU	D941	BOTTINEAU	SOURIS	48 50	100 27	1638	CST	4P	4P	57	57		N D SCHOOL OF FRSTRY	2 3 5
BOTTINEAU STATE PARK	0946	BOTTINEAU	SOURIS	48 56	100 22	2160	CST	6P	6P	5	5		PARK SUPT	2 3 5
BOWBELLS RR STATION	0961	BURKE	SOURIS	48 48	102 15	1958	CST	8A	8A	23	23		CHARLES KAUFMAN	2 3 5
BOWMAN COURT HOUSE	D995	BOWMAN	GRAND	46 11	103 23	2872	MST	5P	5P	34	34		O S HOOK	2 3 4 5
BREIEN	1D52	NORTON	CANNONBALL	46 23	10D 57	1719	CST		8A				MELVIN NELSON	2 3
BUTTE	1225	MC LEAN	SOURIS	47 50	100 40	174D	CST	6P	6P	24	24		M O ANDERSON	2 3 5
CARRINGTON	1360	FOSTER	JAMES	47 27	99 08	1579	CST	7A	7A	51	51		SOO LINE AGENT	2 3 5
CARSON 2 SW	137D	GRANT	HEART	46 23	101 35	250D	MST	7P	7P	37	37		J W EVENS	2 3 5
CASSELTON	1400	CASS	RED	46 54	97 13	934	CST	5P	5P	53	53		WALLACE G SWEENEY	2 3 5
CAVALIER POWER PLANT	1435	PEMBINA	PEMBINA	48 48	97 38	894	CST	5P	5P	13	41		CITY LIGHT & POWER	2 3 5
CENTER	1456	OLIVER	MISSOURI	47 07	101 18	2100	MST	7P	7P	11	11		FRED L HEINZ	2 3 5
COGSWELL 6 W	1525	SARGENT	JAMES	46 07	97 55	1291	CST		7A	4	4		JORN WADARL	3
COLGATE	1686	STEELE	RED	47 14	97 39	1180	CST		6P		15		O M JENSEN	3
COOPERSTOWN	1766	GRIGGS	SHEYENNE	47 26	98 07	1428	CST	5P	5P	52	52		R J LOCKNER	2 3 5
COURTENAY	1816	STUTSMAN	JAMES	47 13	98 34	1523	CST		6P		15		G R HANAWALT	3
CROSBY	1871	DIVIDE	SOURIS	48 54	103 18	1954	CST	7A	7A	42	42		VERNON V NICROLS	2 3 5
DAWSON	2018	KIDDER	MISSOURI	46 52	99 45	173D	CST		MID		8		LOUIS J BILLINGTON	3 4
DEVILS LAKE WB CITY	2158	RAMSEY	DEVILS LAKE	48 07	98 52	1471	CST	MID	MID	44	73		U S WEATHER BUREAU	2 3 4 5
DICKINSON CAA	2183	STARK	HEART	46 48	102 48	2587	MST	MID	MID	8	8		CAA	2 3 4 5
DICKINSON EXP STATION	2188	STARK	HEART	46 53	102 48	2460	MST	7A	7A	57	57		LEROY MOOMAW	2 3 5 6
DRAKE	2298	MC RENRY	SOURIS	47 55	100 22	1634	CST	7A	7A	19	19		GEORGE A PAULUS	2 3 5
DUNN CENTER	2365	DUNN	KNIFE	47 21	102 37	2191	MST	6A	6A	50	50		FRANK R SOMMARS	2 3 5
DUNSFITH ST SANITARIUM	2385	ROLETTE	SOURIS	48 50	100 02	2001	CST	5P	5P	53	53		STATE TUBERCULOSIS	2 3 5
ECKMAN	2472	BOTTINEAU	SOURIS	48 39	101 D3	15D0	CST	7A	7A	43	43		E R SHERMAN	2 3 5
EDGELEY EXP FARM	2482	LA MOURE	JAMES	46 20	98 42	1568	CST	6P	6P	48	48		N D AGRI EXP	2 3 5
EDMORE 1 W	2525	RAMSEY	DEVILS LAKE	48 25	98 29	1524	CST	8P	8P	25	25		MIKE DAVIS	2 3 5
ELBOWOODS	2570	MC LEAN	MISSOURI	47 35	102 D9	2082	CST	6P	6P	56	56		H W CASE	2 3 5
ELLINGDALE NORMAL SCH	2605	DICKEY	JAMES	46 00	98 31	1457	CST	8P	8P	50	50		J E DEMMER	2 3 5
EPPING	2735	WILLIAMS	MISSOURI	48 18	103 21	2224	CST	6P	6P	4D	4D		T SEACRLER	2 3 5
FAIRFIELD 9 N	28D9	BILLINGS	LIT MISSOURI	47 19	103 12	2650	MST		6P		21		MRS EDITH LARSON	3
FARGO WB AIRPORT	2859	CASS	RED	46 54	96 48	895	CST	MID	MID	68	68		U S WEATHER BUREAU	2 3 4 5
FESSENDEN	2949	WELLS	JAMES	47 39	99 37	1610	CST	6P	6P	37	37		JOHN V ZUBER	2 3 5
FORMAN	3117	SARGENT	RED	46 06	97 38	1249	CST	6P	6P	57	57		ART WATERMAN	2 3 5
FORT YATES	32D7	SIOUX	MISSOURI	46 D5	10D 38	1670	MST	6P	6P	49	49		P J JACOBSON	2 3 5
FOXHOLM WILDLIFE REF	3217	WARD	SOURIS	48 27	101 33	1609	CST	5P	5P	24	28		U S WILDLIFE REF	2 3 5
FULLERTON	3287	DICKEY	JAMES	46 1D	98 25	1439	CST	6P	6P	51	51		F O ALIN	2 3 5
GACKLE	33D9	LOGAN	JAMES	46 38	99 D8	1951	CST	6P	6P	18	18		DAVID R HAMM	2 3 5
GARRISON	3376	MC LEAN	MISSOURI	47 38	101 25	1911	CST	MID	MID	72	72		MAE N VORACHEK	2 3 4 5
GLEN ULLIN	3496	MORTON	HEART	46 49	101 49	209D	MST	MID			8		NICK GAUER	3 4
GOLVA	3556	GOLDEN VALLEY	LIT MISSOURI	46 44	1D3 59	2781	MST	7P	6A	8	8		CRESTER K PUDA	2 3 5
GRAFTON STATE SCHOOL	3594	WALSH	RED	48 25	97 26	827	CST	5P	5P	57	57		DR J C LAMONT	2 3 5
GRAND FORKS CAA	3616	GRAND FORKS	RED	47 56	97 05	834	CST	MID	MID	8	8		CAA	2 3 4 5
GRAND FORKS UNIVERSITY	3621	GRAND FORKS	RED	47 55	97 05	83D	CST	MID	7P	58	58		UNIVERSITY OF N D	2 3 5
GRAND	3676	RENVILLE	SOURIS	48 37	101 35	1625	CST		MID				ALVIN C REINKE	3 4
GRANVILLE	3686	MC RENRY	SOURIS	48 16	100 51	1504	CST	7P	7P	42	42		FRED ROBLE	2 3 5
GRENOA	3736	WILLIAMS	MISSOURI	48 37	103 56	2114	CST	5P	5P	40	4D		L D NIELSON	2 3 5
HALLIDAY	3846	DUNN	KNIFE	47 21	102 20	2D73	MST		6P		7		JOHN KISSE	3
HANKINSON RR STATION	3908	RICHLAND	RED	46 04	96 54	1D68	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
HANNAFORD	3926	GRIGGS	SHEYENNE	47 18	98 12	1428	CST		MID		8		HOMER A BENSON	3 4
HANNAH	3936	CAVALIER	PEMBINA	48 59	98 41	1568	CST	6P	6P	55	55		A E PRIOR	2 3 5
HANSBRO	3963	TOWNER	PEMBINA	48 57	99 23	1597	CST	7P	7P	41	41		W E DISHER	2 3 5
HARVEY WATER WORKS	4D13	WELLS	SHEYENNE	47 45	99 53	1596	CST		6P		46		H J REYNOLDS	3
HAZELTON RR STATION	4083	EMMONS	MISSOURI	46 29	10D 17	1978	CST		MID		8		EPHRAIM ZACHER	3 4
HETTINGER	4178	ADAMS	GRAND	46 D0	102 38	2675	MST	6P	6P	42	42		EDGAR MARTIN	2 3 5
HURDSFIELD	4343	WELLS	JAMES	47 27	99 55	1915	CST		MID		8		ED BENSHOOF	3 4
JAMESTOWN CAA	4413	STUTSMAN	JAMES	46 55	-98 41	1497	CST	MID	MID	8	8		CAA	2 3 4 5
JAMESTOWN STATE HOSP	4418	STUTSMAN	JAMES	46 53	98 4D	1457	CST	7P	7P	57	57		N D STATE HOSPITAL	2 3 5
KENMARE	4646	WARD	SOURIS	48 4D	102 D5	1799	CST	MID	MID	17	17		THEO E ECKBERG	2 3 5
KENSAL WILDLIFE REFUGE	4656	STUTSMAN	JAMES	47 15	98 52	144D	CST	7P	7P	8	8		U S WILDLIFE REF	2 3 5
KRAMER 5 SE	4823	BOTTINEAU	SOURIS	48 39	10D 37		CST		MID		9		PAUL A KRETSCHMAR	3 4
LA MOURE	4937	LA MOURE	JAMES	46 21	98 18	1382	CST	7P	7P	2	2		ANDREW REMICK	2 3 5
LANGDON EXP FARM	4958	CAVALIER	PEMBINA	48 45	98 21	1615	CST	5P	5P	53	53		V STURLAUGSON	2 3 5
LARIMORE	5D13	GRAND FORKS	RED	47 54	97 38	1134	CST	7P	7P	56	56		JESSE P PHILLIPS	2 3 5
LEEDS	5D78	BENSON	DEVILS LAKE	48 17	99 26	1515	CST	7P	7P	8	8		JOHN FAGAN	2 3 5
LINTON	5210	EMMONS	MISSOURI	46 16	10D 14	1711	CST	8P	8P	32	32		WM HEYERMAN	2 3 5
LISBON	5220	RANSOM	SHEYENNE	46 26	97 41	1091	CST	7A	7A	45	45		ROBERT M JODSAAS	2 3 5
MADDOCK AGR SCHOOL	5434	BENSON	SHEYENNE	47 58	99 3D	16D4	CST	6P	6P	34	34		BENSON CY A & T	2 3 5
MANDAN EXP STATION	5479	MORTON	HEART	46 48	10D 54	175D	MST	8A	8A	35	35		NO GT PLAINS FIELD	2 3 4 5 6
MANDAN FT LINCOLN PARK	5484	MORTON	MISSOURI	46 47	10D 52	17DD	MST	6P	6P	5	5		ISADORE W SMITH	2 3 5

STATION INDEX - Continued

NORTH DAKOTA
SEPTEMBER 1948

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT. ° / '	LONG. ° / '	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
MANNING	5519	OUNN	KNIFE	47 14	102 46		MST		6P		8		MISS JEANETTE S OAWES	3
MARMARTH	5573	SLOPE	LIT MISSOURI	46 18	103 55	2714	MST	6P	6P	36	40		S P GRANE	2 3 5
MAX	5638	MC LEAN	MISSOURI	47 49	101 17	2093	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
MAYVILLE	5660	TRAIL	REO	47 30	97 19	975	CST	6P	6P	53	53		H A RAGAZ	2 3 5
MC CLUSKY	5710	SREDAN	MISSOURI	47 29	100 29	1943	CST	11A	11A	24	31		J A HAMILTON	2 3 5
MC GREGOR RR STATION	5720	WILLIAMS	MISSOURI	48 36	102 56		CST		MID		8		HARTVIN H HERMANSON	3 4
MC HFNRY 5 N	5730	EDDY	SREYENNE	47 38	98 35	1509	CST	8P	8P	26	26		C E BLASKY	2 3
MC LFOD 3 E	5754	RICKLAND	SHEYENNE	46 24	97 14	1075	CST	7P	7P	37	37		J G CARLSON	2 3
MC VILLE	5764	NFLSON	RED	47 46	98 11	1467	CST		6P		5		H H KNIEFEL	3
MFDINA 1 W	5798	STUTSMAN	MISSOURI	46 53	99 19		CST		6P		8		RUDELPH GRAF	3
MEDORA STATE PARK	5808	BILLINGS	LIT MISSOURI	46 55	103 33	2271	MST	5P	5P	5	34		HARRY ROBERTS	2 3 5
MEDORA TRNMP	5813	BILLINGS	LIT MISSOURI	46 58	103 30	2250	MST	5P	5P				T ROOSEVELT NAT PARK	2 3 5
MILNOR	5933	SARGENT	RED	46 16	97 28	1117	CST	6P	6P	6	6		E W WILSON	2 3 5
MINOT CAA	5988	WARD	SOURIS	48 15	101 17	1724	CST	MID	MID	53	53		CAA	2 3 4 5
MINOT FXP FARM	5993	WARD	SOURIS	48 10	101 18		CST	6P	6P	3	3		N C AGRI EXP ST	2 3 5
MOFFIT RR STATION	6015	BURLEIGH	MISSOURI	46 41	100 18	1760	CST		9A		6		SOO LINE AGENT	3
MOHALL	6025	RENVILLE	SOURIS	48 46	101 31	1639	CST	9P	9P	55	55		IVER JOHNSON	2 3 5
MONTPELIER	6105	STUTSMAN	JAMES	46 42	98 35		CST		8A		8		ROLF HANSON	3
MOTT RR STATION	6155	RETTINGER	CANNON BALL	46 22	102 20	2440	MST	6P	6P	42	42		NORTHERN PACIFIC AGT	2 3 4 5
MUNICH 4 SW	6195	CAVALIER	DEVILS LAKE	48 38	98 53	1598	CST	7P	7P	1	1		HAROLD FELDNER	2 3 5
NAPOLEON 2 SE	6255	LOGAN	MISSOURI	46 28	99 43	1955	CST	7P	7P	57	57		GLADYS J PETERSON	2 3 5
NEW ENGLAND	6315	HETTINGER	CANNONBALL	46 33	102 52	2621	MST	8A	8A	57	57		ALFRED HASEL	2 3 5
NEW SALEM 1 S	6365	MORTON	HEART	46 50	101 25	2163	MST	6P	6P	45	45		WM F GAEBE	2 3 5
OAKES WATER WORKS	6620	DICKEY	JAMES	46 08	98 05	1318	CST	8A	8A	20	20		C M HAGEN	2 3 4 5
OMEMEE 3 SE	6703	BOTTINEAU	SOURIS	48 39	100 20		CST		MID		8		ARTHUR B VOLLMER	3 4
PARK RIVER	6857	WALSH	RED	48 23	97 45	998	CST	5P	5P	45	45		MARTIN SEVERSON	2 3 5
PARSHALL	6867	MOUNTRAIL	MISSOURI	47 57	102 08	1929	CST	6P	6P	17	34		C E SHUBERT	2 3 5
PEMBINA CAA	6947	PEMBINA	RED	48 57	97 15	792	CST	MID	MID	75	75		CAA	2 3 4 5
PETERSBURG	7027	NELSON	RED	48 01	98 00	1524	CST	7P	7P	5	18		F C OVERLAND	2 3 5
PFTTBONE	7047	KIDDER	MISSOURI	47 07	99 31	1856	CST	7P	7P	40	40		L R DETHLOFF	2 3 5
PORTAL	7201	BURKE	SOURIS	49 00	102 33	1954	CST	9A	9A	35	35		U S CUSTOMS SER	2 3 5
POWERS LAKE	7281	BURKE	MISSOURI	48 34	102 39	2205	CST	5P	5P	23	44		E J LEWIS	2 3 5
PRETTY ROCK	7311	GRANT	CANNONBALL	46 11	101 51		MST		6P		8		FREDA LER	3
RAUB	7405	MC LEAN	MISSOURI	47 44	102 04		CST		MID		8		ALVIN LARSON	3 4
RICHARDTON ABBFY	7530	STARK	HEART	46 53	102 19	2467	MST	7P	7P	33	33		ASSUMPTION ABBEY	2 3 5
RIVERDALE GARRISON DAM	7585	MC LEAN	MISSOURI	47 30	101 24	1910			MID				CORPS OF ENGINEERS	2 3 4 5
ROLLA	7664	ROLETTE	PEMBINA	48 52	99 37	1860	CST	7P	7P	11	11		THEO B FAGERLUND	2 3 5
RUGBY 1 N	7704	PIERCE	SOURIS	48 23	100 00	1542	CST	9P	9P	1	20		BOYD C HAWK	2 3 5
RYDER	7749	WARD	MISSOURI	47 55	101 40	2108	CST		9A		20		S C SCHELLENBAUM	3
SANISH	7834	MOUNTRAIL	MISSOURI	47 59	102 32	1835	CST	7A	7A	23	23		H J BUGGE	2 3 5
SARLES 3 E	7844	CAVALIER	PEMBINA	48 55	98 56		MST		MID		8		EARLE M TRELEAVEN	3 4
SEARING	7944	MC KENZIE	YELLOWSTONE	47 34	103 48		MST		MID		8		GLENN S MC RAE	3 4
SELFBRIDGE	7952	STOIX	MISSOURI	46 02	100 56	2183	MST		7P		12		J B SMITH	3
SHARON	7986	STEELE	RED	47 36	97 54	1516	CST	8P	8P	22	25		HUGH LYON	2 3 5
SHERWOOD	8047	RENVILLE	SOURIS	49 00	101 38	1647	CST			1	1		U S CUSTOMS & IMN SER	3
STANLFY	8276	MOUNTRAIL	MISSOURI	48 19	102 24	2258	CST	7P	7P	11	11		LEROY EDWARDS	2 3 5
STEFLE	8366	KIDDER	MISSOURI	46 51	99 55	1857	CST	8P	8P	55	55		LEON V LESHAR	2 3 5
TACUS	8627	MOUNTRAIL	MISSOURI	48 20	101 56	2179	CST		6P		20		GEORGE N PILGARD	3
TIMMER	8727	MORTON	CANNONBALL	46 22	101 00	1742	MST		8A		11		JENNIE GIFFORD	3
TIOGA	8737	WILLIAMS	MISSOURI	48 24	102 56	2279	CST		6P		20		L A SIMON	3
TOWNER	8792	MC HENRY	SOURIS	48 21	100 24	1482	CST	7P	7P	47	47		AUGUST B RIEDER	2 3 5
TROTTERS	8807	GOLDEN VALLEY	YELLOWSTONE	47 20	103 54	2419	MST		5P		23		WALTER GRUNEWALD	3
TURTLE LAKE	8840	MC LEAN	MISSOURI	47 31	100 53	1899	CST	8P	8P	35	35		A S HAAS	2 3 5
TUTTLE 8 SW	8850	KIDDER	MISSOURI	47 02	100 04	1936	CST		8P		40		ADAM LENO	3
UNDERWOOD 11 SW	8877	MC LEAN	MISSOURI	47 25	101 22	1750	CST	6P	6P	24	37		H S SOLENBERGER	2 3 5
UPHAM WILDLIFE REFUGE	8913	MC HENRY	SOURIS	48 37	100 44	1425	CST	5P	5P	8	8		U S WILDLIFE REF	2 3 5
VALLFY CITY	8937	BARNES	SHEYENNE	46 55	98 00	1229	CST	6P	6P	44	44		MISS I C ROBERTSON	2 3 5
VAN HOOK	8970	MOUNTRAIL	MISSOURI	47 57	102 21	1864	CST	9P	9P	8	8		H GLENN SIMS	2 3 5
VFLVA	8990	MC HENRY	SOURIS	48 03	100 55	1511	CST	6P	6P	22	22		OSCAR ANDERSON	2 3 5
VFRONA	9035	LA MOURE	JAMES	46 22	98 04		CST		10A		8		LOUIS J MANDSON	3
WAHPFTON POWER PLANT	9095	RICRLAND	RED	46 17	96 36	962	CST		MID		8		NEWTON O JONES	3 4
WAHPFTON STATE SCHOOL	9100	RICHLAND	RED	46 16	96 36	962	CST	5P	5P	57	57		STATE SCR OF SCIENCE	2 3 5
WALHALLA	9155	PEMBINA	PEMBINA	48 56	97 55	966	CST		7P		8		PETER PAULUS	3
WASHBURN	9195	MC LEAN	MISSOURI	47 17	101 02	1731	CST	6P	6P	46	46		FRED F JEFFERIS	2 3 5
WATFORD CITY	9233	MC KENZIE	MISSOURI	47 48	103 17	2084	CST	8P	8P	36	36		J C ZELLER	2 3 5
WESTHOPE	9333	BOTTINEAU	SOURIS	48 55	101 01	1508	CST	6P	6P	43	43		REV R CAREY	2 3 5
WILDROSE	9400	WILLIAMS	MISSOURI	48 38	103 10	2258	CST		6P		19		JONATHAN WINKJER	3
WILLISTON L C BRIDGE	9420	WILLIAMS	MISSOURI	48 07	103 44		CST		7A		70		U S WEATHER BUREAU	7
WILLISTON WB CITY	9425	WILLIAMS	MISSOURI	48 09	103 35	1877	CST	MID	MID		70		U S WEATHER BUREAU	2 3 4 5
WILLOW CITY	9445	BOTTINEAU	SOURIS	48 36	100 17	1471	CST	8P	8P	57	57		O M SANDERSON	2 3 5
WILTON RR STATION	9455	MC LEAN	MISSOURI	47 09	100 48	2159	CST	7:30A	8A	14	14		SOO LINE AGENT	2 3 5
WISHEK	9515	MC INTOSH	MISSOURI	46 16	99 34	2010	CST	8A	8A	28	28		H M LARSON	2 3 5
WASHBURN POWER PLANT	9200	MC LEAN	MISSOURI	47 17	101 02		CST		7A					7

The four digit identification numbers in the index number column of the Station Index are assigned on a State basis. There will be no duplication of numbers within a State.

Delayed data and corrections will be carried only in the June and December issues of this bulletin.

Stations appearing in the Index, but for which data are not listed in the tables, are either missing or received too late for inclusion in this issue.

Unless otherwise indicated, dimensional units used in this bulletin are: Temperature in °F., precipitation and evaporation in inches, river stages in feet and wind movement in miles.

When hourly precipitation is missing for several days, only the first and last days are shown in Table 4.

When hourly precipitation is accumulated over a period of 3 or more calendar days, with unknown hourly or daily distribution, the first and last days are shown in Table 4.

Data in Tables 3, 5 and 6 are for the 24 hours ending at time of observation. See the Station Index for observation time.

-	No record.
+	And also on later dates.
*	Amount included in following measurement. Time distribution unknown.
6	Precipitation measured at 6-hourly intervals, no recording gage.
B	Adjusted to a full month.
m	One or more days of record missing. See Table 5 for detailed daily record.
R	Station equipped with recording gage only. All amounts in Table 3 are for the non-recording gages, except for stations with this reference.
T	Trace, an amount too small to measure.
X	Daily totals are for the 24 hours ending at 1:30 A. M. EST of the following day.
Z	Hourly amounts from recording gage at the same site may be found in Table 4.
//	Gage is equipped with wind shield.

Subscription Price: 15¢ per copy; \$1.50 a year. (Yearly subscription includes Annual Summary. Correspondence regarding subscriptions should be addressed to the Weather Records Processing Center, 1300 U. S. Court House, Chicago 4, Illinois).

Table 4 data were formerly published in Hydrologic Bulletins for Upper Mississippi and Missouri District. Amounts in this table are from recording gages. Traces are not shown.

Figures and letters following a station name indicate the distance in miles and direction from the post office of the same name.

551.05
UNNT
V.57¹⁰

Nat. Hist.

U. S. DEPARTMENT OF COMMERCE
CHARLES SAWYER, Secretary
WEATHER BUREAU
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CLIMATOLOGICAL DATA

NORTH DAKOTA

OCTOBER 1948

Volume LVII No.10



NAT. HIST.

NORTH DAKOTA - OCTOBER, 1948

F. J. Bavendick, Section Director - Bismarck

GENERAL SUMMARY

The temperature averaged more than two degrees above the October normal in all sections of the state, with the greatest plus departures during the last ten days of the month. Only one station, Medora, reported a reading below zero. Many of the observers reported Indian Summer weather prevailing during most of the month. The wind was light and more than the usual amount of sunshine was recorded. Killing frost occurred on the 1st or 2nd in the northern and eastern parts of the state but none occurred until the 9th or 10th over the southwest, making the 1948 frost free season one of the longest of record.

Precipitation was slightly below normal in the eastern division, above normal in the central division and below normal in the western division. Most of the precipitation occurred during the first week and during the last few days of the month. Following the unusually dry September, the October precipitation was not enough to produce good subsoil moisture.

The weather was favorable for all outdoor work. By the close of the month harvesting and threshing was about completed. Corn and late flax matured rapidly under the ideal weather conditions and bumper crops were reported. Precipitation near the close of the month was favorable for fall plowing in many sections, especially in the southwest portion. Pastures were dry but livestock were in good condition and were fattening in the fields.

TEMPERATURE

The mean temperature for the state was 46.4°, which is 2.1° above normal for the month. The monthly mean temperature ranged from 49.7° at Bowman to 41.6° at Kensal. The highest temperature recorded in the state was 85° at Duhn Center, on the 4th, and the lowest -1° at Medora on the 17th.

PRECIPITATION

The average precipitation for the state was 0.97 inch, which is 0.04 inch below normal for October. The total amounts recorded at various stations ranged from 2.16 inches at Sharon to 0.13 inch at Grenora. The heaviest rainfall reported in any one day was 1.42 inches at Devils Lake on the 6th. The monthly average of snowfall was T or 1.5 inches less than normal. The greatest monthly amount was 0.1 inch at Devils lake; the least T at several stations.

ACKNOWLEDGMENTS

In addition to the climatological data from some 6,000 Weather Bureau and cooperative weather stations, this bulletin series contains records from Hydroclimatic Network Stations which were formerly reproduced in the Hydrologic Bulletin Series. The Hydroclimatic Network is a nationwide net of rain gages -- mostly of the recording type which produce continuous records of precipitation. It was established in 1939 at the request of the Corps of Engineers, Department of the Army, to supplement existing precipitation stations in order to provide records of rainfall intensity which were essential to the planning of flood control and related works by the Corps of Engineers. This Network, now numbering about 2,000 recording, and 1,000 non-recording rain gages, has been maintained by the Weather Bureau through working funds transferred annually to the Weather Bureau by the Corps of Engineers. These transfers averaged about \$250,000 per year between 1940 and 1944, and nearly \$375,000 since that date. For the years 1940-42, the Department of Agriculture transferred about \$100,000 per year to provide data required in its work, and since 1947 the Bureau of Reclamation has transferred about \$25,000 per year to meet the increasing needs of their program in the Western States.

Previous to the introduction of this bulletin series, data from Hydroclimatic Network stations were presented in bulletins (Hydrologic Bulletins) which were issued monthly for each of 8 drainage areas embracing the entire United States, but since the Network was established to meet the internal requirements of the Federal agencies referred to above, no provision was made for public dissemination of the data, distribution being limited to cooperating agencies and to certain public repositories. A list of locations where reference copies of the Hydrologic Bulletin Series are available for inspection may be obtained upon application to Chief, U.S. Weather Bureau, Washington 25, D. C.

Many other records published in this bulletin have been made available through the cooperation of various public offices, private agencies, and individuals as listed in the Station Index.

PRESSURE, WIND, HUMIDITY, SUNSHINE, DEGREE DAYS

NORTH DAKOTA

OCTOBER 1948

STATIONS	SEA LEVEL PRESSURE EXTREMES - INCHES				WIND				RELATIVE HUMIDITY AVERAGES				SUN- SHINE	DEGREE DAYS 65° BASE
	HIGHEST	DATE	LOWEST	DATE	AVERAGE SPEED M.P.H.	MAXIMUM SPEED M.P.H.	DIRECTION	DATE	1:30A EST	7:30A EST	1:30P EST	7:30P EST	PERCENT OF POSSIBLE	
BISMARCK AIRPORT	30.50	16	29.40	5	10.6	34	NW	7	74	82	50	51	72	586
DEVILS LAKE	30.47	2	29.41	6	9.1	27	S	4	-	79	49	52	75	582
FARGO AIRPORT	30.51	2	29.41	6	13.2	36	SE	5	66	77	52	54	60	521
WILLISTON	30.51	16	29.31	5	6.6	33	NW	15	58	72	44	39	80	570

TABLE 1
COMPARATIVE DATA

YEAR	TEMPERATURE			PRECIPITATION					YEAR	TEMPERATURE			PRECIPITATION				
	MEAN	HIGHEST	LOWEST	AVERAGE	DIVISION		AVERAGE SNOWFALL	DAYS WITH .01 OR MORE		MEAN	HIGHEST	LOWEST	AVERAGE	DIVISION		AVERAGE SNOWFALL	DAYS WITH .01 OR MORE
					WESTERN	EASTERN								WESTERN	EASTERN		
1892	47.2	95	7	0.58			T	3	1927	47.0	88	12	1.33			1.0	5
1893	40.6	79	0	1.05			0.9	5	1928	43.5	85	3	0.46			0.6	2
1894	43.0	77	16	1.66			0	6	1929	46.8	88	10	1.85			5.1	6
1895	40.5	85	-12	0.24			0	2	1930	40.8	86	0	1.81			0.3	7
1896	40.2	88	5	0.69			0	3	1931	47.7	90	10	1.39			0.2	6
1897	45.9	93	6	0.77			0.8	4	1932	38.3	90	-3	2.27			9.1	8
1898	38.8	84	8	2.23			4.7	6	1933	41.5	88	5	0.54			1.7	4
1899	42.1	86	7	1.17			1.3	5	1934	49.0	94	5	1.01			0.1	3
1900	48.2	87	14	1.54			T	6	1935	43.5	86	-10	0.16			0.7	2
1901	47.5	88	11	1.61			T	5	1936	42.3	90	-5	0.21			1.1	3
1902	43.7	87	10	1.28			0.7	4	1937	43.9	94	1	0.80			0.2	4
1903	47.0	81	11	0.94			0.2	3	1938	50.9	95	4	0.55			1.1	4
1904	46.6	87	10	0.90			T	5	1939	41.3	84	-6	0.75			1.2	7
1905	40.3	93	0	0.36			1.2	5	1940	50.7	89	18	1.56			T	6
1906	45.0	89	0	0.49			1.4	4	1941	44.5	81	0	1.32			2.0	5
1907	44.4	88	4	0.61			0.2	3	1942	46.5	90	-3	0.46			1.8	4
1908	43.0	86	8	1.63			0.7	6	1943	48.2	89	10	0.76			2.8	3
1909	43.1	97	0	0.65			0.9	3	1944	48.7	84	11	0.12			T	1
1910	48.2	95	0	0.51			0.1	3	1945	45.1	89	6	0.37			T	3
1911	42.5	86	-10	1.24			0.5	6	1946	40.1	91	2	2.23			8.5	8
1912	44.4	90	0	1.07			3.5	4	1947	51.2	97	15	1.31			0.9	7
1913	39.3	90	-2	1.59			0.7	4	1948	46.4	85	-1	0.97			T	3
1914	50.0	97	0	0.93			T	4	PERIOD	44.3	98	-18	1.01			1.5	4
1915	46.6	87	10	1.09			0.2	4									
1916	40.0	85	-2	0.70			2.0	4									
1917	34.7	82	-4	0.78			6.4	5									
1918	46.2	90	4	0.53			0.8	4									
1919	33.5	84	-18	1.14			9.3	6									
1920	49.3	95	6	0.55			0.1	3									
1921	47.3	88	16	0.66			T	4									
1922	45.7	98	8	0.58			2.3	3									
1923	44.0	84	-8	0.89			0.5	4									
1924	50.3	86	19	2.42			0.3	7									
1925	33.3	66	-16	0.81			3.7	6									
1926	42.6	85	4	1.36			1.0	6									

CLIMATOLOGICAL DATA

Table 2

Station	Temperature								Precipitation									
	Average	Departure from Normal	Highest	Date	Lowest	Date	No. of Days		Total	Departure from Normal	Greatest Day	Date	Snow, Sleet, Hail			No. of Days		
							Max. 90° or above	Min. 32° or below					Total	Max. Depth on Ground	Date	.01 or more	.25 or more	1.00 or more
EASTERN DIVISION																		
ARVILLA STATE PARK	46.8M				15	17	15		.70		.70	30				2	2	
BALDILL DAM	46.4M						16		1.16		.47	7				4	2	
CARRINGTON	46.4M	2.7							1.57	0.54	.95	6				3	3	
CASSELTON	47.8M	3.1	77	25	16	17	11		1.41	0.06	.56	30				5	2	
CAVALIER POWER PLANT	47.8	4.8	73	3	14	17	13		.43	-0.86	.26	6				5	1	
COOPERSTOWN	46.2	1.5	77	25	11	17	18		1.30	0.22	.95	6				3	1	
DEVILS LAKE WB CITY	46.3	3.9	74	3	11	17	15		1.68	0.43	1.42	8	.1	T	18	4	1	1
EDGELEY EXP FARM	47.6	2.0	82	25	15	17	12		1.30	0.28	.90	6				4	1	
EDMORE 1 W	45.7	3.2	75	4	11	17	18		1.22	0.24	.89	8				5	1	
ELLEDALE NORMAL SCH	47.7	1.8	77	25	15	17	10		1.34	0.28	.78	6				4	2	
FARGO WB AIRPORT	48.1	3.6	78	25	16	17	13		.53	-1.16	.29	30	T			4	1	
FORMAN	47.7M	1.7							.56	-0.79	.44	6				2	1	
FULLERTON	47.1	1.8	79	25	14	17	15		1.46	0.13	.78	6				5	2	
GACKLE	45.8	0.4	76	25	12	17	13		1.54	0.58	1.12	6				4	2	1
GRAFTON STATE SCHOOL	47.9	4.1	72	3+	15	17	12		.39	-0.75	.17	6	T			4		
GRAND FORKS CAA	46.7	3.0	77	25	17	17	14		.51	-0.85	.27	30	T			4	1	
GRAND FORKS UNIVERSITY	47.0	3.3	76	25	16	17	13		.66	-0.70	.43	30	T			4	1	
HANKINSON RR STATION	46.3	-0.3	74	26	13	17	14		1.21	-0.16	.35	7				5	3	
HILLSBORO	48.4	3.2	81	25	16	17	9		1.21	-0.13	.66	30	T	T	18	4	1	
JAMESTOWN CAA	46.5	1.8	81	25	11	17	15		1.63	0.34	1.09	6				4	2	1
JAMESTOWN STATE HOSP	46.9	2.2	81	25	12	17	12		1.56	0.27	1.04	6				4	2	1
KENSAL WILDLIFE REFUGE	41.6		78	25	9	17	22		1.70		1.23	6				4	1	1
LA MOURE	47.2		80	25	13	17	15		1.12		.78	6				5	1	
LANGDON EXP FARM	46.5	5.6	74	25	11	17	17		.96	-0.07	.60	6				5	1	
LARIMORE	47.5M	3.4	78	25	14	17	9		.72	-0.72	.40	6				3	1	
LISBON	46.8	2.1	80	25	14	17	16		1.15	-0.09	.63	6				4	2	
MAYVILLE	48.4M	2.4	82	25	16	17	10		.76	-0.50	.34	30				5	2	
MC HENRY 6 N	45.6	2.3	75	25	16	17	17		1.37	0.32	1.08	6	T			3	1	1
MC LEOD 3 E	49.1	2.6	78	25	13	17	15		1.58							4		
MILNOR	46.6M								1.31	-0.05	.61	30				4	3	
MUNICH 4 SW	45.2		72	3+	10	17	18		1.41		.99	6				5	1	
OAKES WATER WORKS	47.0	1.0	82	26	14	17	21		1.21	-0.10	.67	6				4	2	
PARK RIVER	48.3	4.6	74	25	14	17	9		.67	-0.51	.34	6				4	2	
PEMBINA CAA	46.4	4.8	72	3	14	17	13		.43	-0.77	.25	30	T			5	1	
PETERSBURG	46.2		71	3	10	17	13		1.01	-0.16	.70	6				3	1	
SHARON	47.3	3.7	79	25	11	17	12		2.16	0.90	1.22	8				4	3	1
VALLEY CITY	47.4	2.3	80	25	13	17	14		1.41	0.09	.77	6				3	2	
WAHPETON STATE SCHOOL	49.2	2.2	75	25	18	17	10		1.29	-0.15	.53	7				6	3	
DIVISION	46.9	2.7							1.15	-0.09								
MIDDLE DIVISION																		
ASHLEY	45.3M	0.9	79	26	13		21				.55	6				4	2	
BELCOURT INDIAN RES	44.1		73	3	10	17	17		1.37		.82	6				3	1	1
BISBEE	45.3M	1.5							1.29	0.30	1.10	7				4	2	
BISMARCK WB CITY	46.8M	1.6	79	4	15	17	15		1.52	0.61	.75	6				4	2	
BISMARCK WB AIRPORT	46.0	2.4	79	3	11	17	21		1.50	0.56	.89	6	T			6	2	
BOTTINEAU	44.9	3.5	76	3	4	17	21		1.06	0.09	.58	6				3	2	
BOTTINEAU STATE PARK	46.2		74	3	10	17	21		1.43		.80	6				3	2	
CARSON 2 SW	47.3	2.8	82	24	9	17	14		1.29	0.38	.56	6	T			5	2	
CENTER	44.9	-0.4	81	24	18	17+	25		1.28	0.37	.73	6				3	2	
DRAKE	45.6	2.5	78	4+	10	17	18		1.29	0.25	.52	6				4	2	
DUNSEITH ST SANITARIUM	46.0	4.4	73	3					1.09	0.29	.53	6	T			4	2	
ECKMAN	43.3	1.1	80	25	5	17	24		1.17	0.33	.57	6				4	2	
FESSENDEN	46.5	3.2	78	24	12	17	14		1.20	0.14	.70	6				5	2	
FORT YATES	48.1	1.4	79	24	12	17	18		2.08	1.09	.60	6+	T			4	4	
FOXHOLM WILDLIFE REF	46.9	4.0	79	3	12	17	15		.73	-0.15	.53	6	T			3	1	
GARRISON	45.9	2.7	78	3	10	17	18		1.06	0.20	.63					5	1	
GRANVILLE	46.1	2.5	82	24	9	17	20		1.24	0.40	.86	6				3	1	
HANSBORO	45.2	3.9	74	24	10	17	18		1.31	0.27	.82	6	T			5	2	
LEEDS	46.6		78	24	10	17	18		1.40		.84	6	T			5	2	
LINTON	47.7	2.2	78	3	9	17	17		1.50	0.46	.68	6				4	3	
MADDOCK AGR SCHOOL	46.0	2.5	80	24	19	19	18		1.18	0.20	.73	6				4	2	
MANDAN EXP STATION	46.5	1.8	79	4	12	17	18		1.34	0.44	.66	6	T			4	2	
MANDAN FT LINCOLN PARK	47.3		80	3	12	17	20		1.39		.70	6				4	2	
MAX	44.2	1.3	78	25	13	17	21		1.17	0.37	.75	6				3	2	
MC CLUSKY	46.4M	3.0							1.44	0.45	.74	6				4	2	
MINOT CAA	46.7	2.9	79	24	14	17	14		1.01	-0.40	.72	6	T			5		
MINOT EXP FARM	47.1M								1.07		.72	6				3	1	
MOHALL	45.6	3.4	81	24	11	16	21		.87	-0.17	.66	8				3	1	
NAPOLEON 2 SE	46.2	2.1	73	3	13	17	24		1.19	0.10	.49	6				5	2	
PETTIBONE	46.0	3.4	77	24	9	17	17		1.41	0.42	.83	6				3	2	
RIVERDALE	48.1		78	3	13	17	13		.98		.68	6	T			3	2	
ROLLA	45.2	2.7	72	3	12	17	12		1.53	0.56	.82	6	T			7	2	
RUGBY 1 N	45.6		77	3+	7	17	18		.97	0.08	.52	6	T			3	2	
STEELE	46.6	2.5	76	24	8	17	18		1.50	0.38	.85	6				4	2	
TOWNER	42.8	-0.7	69	4	6	16	27		.56	-0.33	.28	27+				2	2	
TURTLE LAKE	46.1	2.0	78	3	11	17	18		1.32	0.48	.80	6				4	2	
UNDERWOOD 12 W	47.0	2.0	80	3	9	17	16		.95	-0.12	.61	6				4	1	
UPHAM WILDLIFE REFUGE	45.1		78	3	7	17	21		1.25		.80	6				3	2	
VELVA	46.9	2.6	78	3+	13	17	13		1.14	0.19	.80	6				3	1	
WASHBURN	47.8	2.8	78	24	8	17	14		1.17	0.25	.60	6				3	2	
WESTHOPE	45.9	3.3	78	24	9	17	18		1.05	0.25	.80	6				3	1	
WILLOW CITY	45.4M	3.9							1.28	0.49	.86	6				3	1	
WILTON RR STATION	44.9	0.0	75	4	14	17	18		1.88	0.93	.94	6				5	3	
WISHEK	44.7M	0.7							1.23	0.								

See reference notes following Station Index.

CLIMATOLOGICAL DATA

NORTH DAKOTA

OCTOBER 1948

Table 2-Continued

Station	Temperature								Precipitation									
	Average	Departure from Normal	Highest	Date	Lowest	Date	No. of Days		Total	Departure from Normal	Greatest Day	Date	Snow, Sleet, Hail			No. of Days		
							Max. 90° or above	Min. 32° or below					Total	Max. Depth on Ground	Date	.01 or more	.25 or more	1.00 or more
WESTERN DIVISION																		
ALMONT 7 SW	48.3		81	24	13	17		11	1.10		.52	6				6	2	
AMIDON	47.8	2.8	82	4	7	17		18	.40	-0.57	.35	5				3	1	
BELFIELD	47.3	1.6	82	4	7	17		18	.38	-0.59	.32	7				2	1	
BOWBELLS RR STATION	44.4	2.6	80	25	9	17		22	.66	-0.19	.57	6				3	1	
BOWMAN COURT HOUSE	49.7	4.9							.25	-0.63	.25	5				1	1	
CROSBY	43.5	1.3	80	4	7	17		26	.47	-0.36	.47	5				1	1	
DICKINSON CAA	46.3	2.5	81	3	10	17		16	.40	-0.51	.33	5	T			3	1	
DICKINSON EXP STATION	45.2	1.4	82	4	9	17		20	.55	-0.36	.35	6				3	1	
DUNN CENTER	46.0m	3.9	85	4	9	17+		24	.54	-0.29	.54	6				1	1	
ELBOWOODS	46.5m	1.7	81	3					.60	-0.20	.50	6				3	1	
EPPING	46.9m	4.8							.50	-0.27	.45	5				2	1	
GRENORA	47.6	5.5	80	3	9	17		18	.13	-0.66	.13	5				1		
HETTINGER	47.0	0.9	81	3+	5	17		19	.69	-0.02	.28	30				5	1	
KENMARE	46.7	3.2	83	25	12	17		18	.65	-0.31	.61	6				2	1	
MARMARTH	46.7	0.7	83	3	7	17		21	.15	-0.64	.14	5				1	2	
MEDORA STATE PARK	45.4	-0.9	83	24				21	.21	-0.57	.21	5	T			1		
MEDORA T R N M P	45.6		84	3+	-1	17		22	.43		.21	5				3		
MOTT RR STATION	46.3	1.9	80	3+	19	16		19	.54	-0.29	.30	30	T			3	1	
NEW ENGLAND	46.4	2.3	81	4	6	17		20	.41	-0.38	.41	6				1	1	
PARSHALL	44.9	0.5	79	3	4	17		21	.75		.66	6				5	1	
PORTAL	44.8	3.3	80	4	7	17		20	.56	-0.28	.56	6				1	1	
POWERS LAKE	45.9	1.4	76	24				20	.61	-0.44	.38	6				2	1	
RICHARDTON ABBEY	47.8	3.2	80	3+	8	17		13	1.07	0.28	.60	30				3	2	
SANISH	44.1	-0.1	82	4	6	17		23	.64	-0.13	.60	5				2	1	
STANLEY	43.8		78	24	5	17		22	.65	-0.19	.43	6				4	1	
WATFORD CITY	48.0	3.8	83	3	9	17		17	.58	-0.29	.56	5				2	1	
WILLISTON WB CITY	46.6	3.2	81	3	13	17		17	.19	-0.67	.19	5	T			1		
DIVISION	46.3	2.4							.52	-0.30								
STATE	46.4	2.1							.97	-0.04								

See reference notes following Station Index.

DAILY PRECIPITATION

NORTH DAKOTA
OCTOBER 1948

Table 3

Station	Day of Month																															Total		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
ADAMS						.06	.53									T	T															0.85		
ALEXANDER R R STATION						.28																										0.28		
ALMONT 7 SW					.13	.52	.10			T						.01													.03	.31		1.10		
ALPHA 1 S					.18	T										T																0.18		
AMIDON					.35	.03	.02										T															0.40		
ARVILLA STATE PARK						.32																										0.70		
ASHLEY	Z					.55	.30	.05			T	T	T	T		.02													.01	.38		1.18		
BALDHILL DAM						.45	.47																									1.37		
BELCOURT INDIAN RES						.82	.32																						.07	.18		0.38		
BELFIELD							.32																								.08			
BEULAH					.22	.58	.01																							T	.14	0.95		
BISBEE						1.10																							.07	.12	T	1.29		
BISMARCK WB CITY						.75	.19	.03																								1.52		
BISMARCK WB AIRPORT	Z	.01			.08	.89	.08									T	T												.27	.22		1.50		
BOTTINEAU						.58	.33										T												T	.15		1.06		
BOTTINEAU STATE PARK						.80	.48																								.15	1.43		
BOWBELLS R R STATION					T	.57	.04																							.05	T	0.86		
BOWMAN COURT HOUSE	Z				.25													T														0.25		
BREIEN						.47	.14																									1.41		
CARRINGTON						.95	.37																							.25	T	1.57		
CARSON 2 SW					.02	.56	.18																							.08	.47	1.29		
CASSELTON						.54	.19									.10														.02	.58	1.41		
CAVALIER POWER PLANT						.26										.04														.01	.09	.03	0.43	
CENTER					T	.73	.21									T															.34	1.28		
COGSWELL						.50	.10	T			T																			T	.45	1.05		
COLGATE						.70	.22																								.45	1.37		
COOPERSTOWN						.95	.17	T																							.18	T	1.30	
COURTENAY						1.10	.12	T																						.34		1.56		
CROSBY					.47																											T	0.47	
DAWSON	R					.71	.05																							.19	.25	1.20		
DEVILS LAKE WB CITY	Z					1.42			T							.05	T													.04	.17	1.68		
DICKINSON CAA	Z				.33	T										T	T													.02	.05	0.40		
DICKINSON EXP STATION					T	.35																										.18	0.55	
DRAKE						.52	.50																								.23	.04	1.29	
DUNN CENTER						.54																									T		0.54	
DUNSEITH ST SANITARIUM						.53	.41	T		T						T	T													.05	.10	T	1.09	
ECKMAN						.57	.46				T						T														.07		1.17	
EDGELEY EXP FARM	Z	T				.90	.08				T					T														.12	.20	1.30		
EDMORE 1 W						.89	.05									.03	T													.02	.23	1.22		
ELBOWOODS					.01	.50																									.09		0.60	
ELLEDALE NORMAL SCH						.78	.12									T														.19	.25	1.34		
EPPING					.45																										.05		0.50	
FAIRFIELD 9 N					.60																												0.60	
FARGO WB AIRPORT	Z					.14	T									.06	T													.04	.29	0.53		
FESSENDEN						.70	.10									.03	T													T	.28	.11	1.20	
FORMAN						.44																											0.56	
FORT YATES						.60	.33									T															.55	.60	2.08	
FOXHOLM WILDLIFE REF						.53	.13										T														.07		0.73	
FULLERTON						.78	.08									.03															.15	.42	1.46	
GACKLE						1.12	.12																								.02	.28	1.54	
GARRISON	Z				.12	.63	.09																								.02	.20	1.06	
GLEN ULLIN					.41	.12																									.23	.10	0.86	
GRAFTON STATE SCHOOL	R					.17	.01									.06	T														.15		0.39	
GRAND FORKS CAA	Z					.17										.01	T														.08	.27	0.51	
GRAND FORKS UNIVERSITY						.19	.01									.03	T														T	.43	T	0.66
GRAND	R//				.12	.53	.05																								.01	.07	0.78	
GRANVILLE						.86	.18									T															.20		1.24	
GRENORA					.13																											T	0.13	
HALLIDAY					.06	.37	T																								T	.20	0.63	

DAILY PRECIPITATION

NORTH DAKOTA
OCTOBER 1848

Table 3-Continued

Station	Day of Month																															Tot		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
ROLLA						.82	.40		.01						.01	T														.08	.18	.02	1.53	
RUGBY 1 N						.52	.26								T	T														.18	.07	0.97		
RYDER						.60		.11																						.07		0.78		
SANISH	R//				.60																									.04		0.84		
SEARING					.25																											0.25		
SHARON						1.22	.53								T	T														.01	.40	2.16		
SHERWOOD					.44	.10	.20								T	T									T					T	.05	0.79		
STANLEY					.13	.43										T														.03	.06	0.85		
STERLE	T					.85	.15																							T	.48	.02	1.50	
TAGUS					T	.58	.05								T	T														T	.05	0.68		
TIOGA						.60																											0.60	
TOWNER																																	0.56	
TROTTERS				.25												T										T		.28		.03	T		.28	0.56
TURTLE LAKE					T	.80	.18								.01			T												T	.35		0.28	
TUTTLE 8 SW						.54	.28								.02																.45		1.32	
UNDERWOOD 12 W						.61	.04								T	T																	1.27	
UPHAM WILDLIFE REFUGE						.80	.25																				T			.23	.20	.07	0.85	
VALLEY CITY						.77	.22								T	T														T	.42		1.25	
VAN HOOK					.10	.40									T																		1.41	
VELVA						.80	.17								T															T	.17		0.50	
VERONA						.55	.12																										1.14	
WAMPETON POWER PLANT	R					.68	.05								.20	.03															.60		1.27	
WAMPETON STATE SCHOOL						.32	.53								.03	.11															.13	.22	1.31	
WALHALLA						.36	.06																								.05	.25	1.29	
WASHBURN					T	.60	.12								T	T														T	.40	.35	1.17	
WATFORD CITY						.56																										.45		1.17
WESTHOPE						.80	.10																								.02		0.58	
WILDROSE						.34																									.15		1.05	
WILLISTON WB CITY	R					.18									T															T	.07	T	0.41	
WILLOW CITY						.86	.21								T	T														T	.21		0.19	
WILTON RR STATION						.94	.45	.02									.01																1.28	
WISHEK	T	T				.53	.29	T				T	T																		.46		1.88	
																															.39	T	.02	1.23

See reference notes following Station Index.

TABLE 4

HOURLY PRECIPITATION

SEE REFERENCE NOTES FOLLOWING STATION INDEX

TABLE 4 — Continued

HOURLY PRECIPITATION

NORTH DAKOTA
OCTOBER 1948

STATION	A. M. HOUR ENDING												P. M. HOUR ENDING												TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
JAMESTOWN CAA	//															.01			.08	.01	.12	.09	.08	.01	.47	
KRAMER 5 SE																									.03	
MANDAN EXP STATION														.03	.01			.01	.02	.05	.04	.02	.12	.10	.40	
MC GREGOR RR STATION																			*	*	*	*	*	*	*	
MINOT CAA	//																		.01	.01					.01	
MOTT RR STATION																		.03	.02	.05	.05	.04	.01	.01	.21	
OAKES WATER WORKS														.03	.07		.03	.01		.06	.04	.01			.25	
PEMBINA CAA	//												.01	.02											.01	
RAUB	//																				.01	.01			.03	
RIVERDALE																						.03	.02	.03	.02	
WAHPETON POWER PLANT										.01	.01	.01													.10	
-30th-																										
ASHLEY	//	.09	.04	.01																					.22	
BISMARCK WB AIRPORT		.02	.01	.10																					.25	
DAWSON		.05	.06	.02	.02	.03																			.17	
DEVILS LAKE WB CITY		.03	.02	.02																					.07	
DICKINSON CAA		*	*	*									*	*	*										.32	
EDGELEY EXP FARM					.03	.04	.01	.16	.04	.01															.29	
FARGO WB AIRPORT	//	.02	.02	.01	.01	.05	.05	.04	.01	.01	.01														.19	
GARRISON		.02	.02	.02				.02																	.10	
GLEN ULLIN	//	.08								.05	.02	.03	.03	.01	.01										.23	
GRAND FORKS CAA	//	.01	.01		.01		.01			.01															.07	
GRAND FORKS CAA		.03											.15	.04		.02	.01								.24	
HANNAFORD	//	*	*	*	*	*	*	*	*	*	*														.40	
HAZELTON RR STATION		.01	.01		.02	.03	.02	.03	.03	.02															.03	
HURDSFIELD	//	.01	.01		.02	.03	.03																		.02	
JAMESTOWN CAA		.04	.01	.02	*	*	.02																		.15	
KRAMER 5 SE		*	*	*																					.02	
MANDAN EXP STATION	//		.01		.01	.03	.02	.03	.02	.01	.01	.01	.01												.17	
MC GREGOR RR STATION		.01	.01		.02																				.03	
MINOT CAA	//	.01	.01		.02																				.17	
MOTT RR STATION		.01	.08	.01																					.04	
OAKES WATER WORKS		.01	.01		.01	.01	.01																		.10	
PEMBINA CAA	//	.02	.01		.03	.06	.01	.01	.01																.11	
RAUB		.01	.02	.02	.03	.06	.06	.01	.04	.01	.01														.06	
RIVERDALE						.16	.06																		.27	
WAHPETON POWER PLANT																									.22	

SEE REFERENCE NOTES FOLLOWING STATION INDEX

DAILY TEMPERATURES

Table 5

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ALMONT 7 SW	MAX	88	84	80	75	64	48	56	59	55	51	65	61	67	61	56	41	54	59	65	62	69	60	66	81	66	63	62	61	52	52	60	61.4
	MIN	40	41	40	50	47	40	38	38	31	26	28	37	30	35	40	20	13	37	32	38	29	32	35	38	42	34	31	26	45	45	36	35.3
AMIDON	MAX	85	70	81	82	71	62	70	56	56	57	64	60	74	72	62	50	54	58	71	61	71	60	76	78	63	63	57	56	57	51	58	64.3
	MIN	34	37	38	48	44	35	30	38	22	22	26	30	34	32	40	12	7	24	30	29	25	27	36	43	39	27	31	24	40	49	29	31.3
ARVILLA STATE PARK	MAX	81	65	73	70	69	61	64	66	54	49	60	63	64	86	68	48	39	60	59	58	61	53	60	78	61	67	62	61	58	63	61.4	
	MIN	27	22	33	46	48	51	48	38	34	35	37	30	32	25	37	18	15	33	18	31	18	34	19	32	32	35	26	33	25	48	41	32.3
ASHLEY	MAX	84	59	63	72	70	63	51	53	63	53	51	60	65	60	63	63	36	48	60	58	61	61	53	62	74	79	63	63	64	53	60.3	
	MIN	36	29	43	45	48	42	39	34	30	25	29	31	27	26	30	24	13	26	17	23	21	24	22	30	30	31	28	30	35	45	30.4	
BALDHILL DAM	MAX	84	62		75	73	65	54	64	65		54	53	66	62	64	61		46	60	57	58	57	52		67	82		72	62	56	62.0	
	MIN	34	25		34	45	47	42	37	30		31	28	27	22	30	24		15	30	19	40	17		30	27	25	30	38	46	30.9		
BELCOURT INDIAN RES	MAX	58	63	73	72	65	66	60	57	49	52	63	53	62	61	50	41	42	52	51	52	57	53	62	70	61	58	64	58	57	48	55	57.5
	MIN	20	17	38	43	46	43	40	36	32	34	35	28	35	31	35	21	10	31	13	24	20	28	62	31	37	28	26	21	30	45	39	30.7
BELFIELD	MAX	76	74	80	82	78	60	80	58	57	58	67	68	74	73	57	40	55	63	72	63	71	62	77	81	62	64	57	62	56	60	62	65.5
	MIN	45	44	31		51	38	30	31	19	17	19		22	23	35	16	7		18	26	21	25	32	27	34	24	28	38	47	40	29.2	
BISBEE	MAX	59	68	75	73	71	69	65	62					64	63	52	46	43	53	53	51	54	51	62	72	62	59	65	61	59	48	54	59.7
	MIN	24	22	34	45	46	45	44	38					30	32	35	22	9	27	22	25	22	31	21	27	39	29	28	28	33	45	36	31.0
BISMARCK WB CITY	MAX		69	56	79	74	64	46	54	60	54	49	82	61	80	62	55	35	55	60	64	62	62	54	66	73	68	64	65	65	55	52	60.2
	MIN	43	33	41	50	52	42	39	37	32	32	29	30	29	28	41	24	15	21	21	32	24	34	32	35	33	33	29	31	38	43	33	33.4
BISMARCK WB AIRPORT	MAX	62	67	79	74	64	47	52	60	54	49	66	62	64	66	54	38	54	60	63	63	66	54	67	77	70	64	65	63	55	52	62	61.1
	MIN	36	33	40	51	47	41	35	32	30	31	28	29	27	27	38	16	11	27	20	30	66	54	67	30	30	31	28	28	39	35	30	30.9
BOTTINEAU	MAX	60	67	76	73	70	60	57	55	51	52	65	58	59	61	58	41	47	56	59	57	61	52	67	76	67	55	68	60	61	54	55	59.9
	MIN	21	33	33	45	46	40	42	32	25	28	32	28	27	28	38	20	4	26	22	29	24	26	27	36	33	21	31	25	41	32	31	29.9
BOTTINEAU STATE PARK	MAX	59	58	74	71	69	60	59	59	58	59	65	58	60	61	55	56	40	53	59	56	59	65	74	70	60	58	59	58	55	59	60.2	
	MIN	25	22		53	51	41	40	38	30	31	30	29	31	30	28	30	10	23	20	30	25	29	31	48	41	30	31	29	32	41	39	32.3
BOWBELLS RR STATION	MAX	55	61	68	77	74	60	42	59	55	51	52	63	56	64	64	51	29	55	51	65	59	69	55	68	80	59	63	55	59	57	53	59.0
	MIN	26	29	31	45	50	40	36	37	29	25	27	30	29	28	34	17	9	15	21	32	24	25	25	40	47	26	30	20	32	34	30	29.8
BOWMAN COURT HOUSE	MAX	55	71	81	80	74			55	57	53	63	61	71	73	66	42	50	51	71		62	77	78	74	64	58	59	53	59	65	64.1	
	MIN	40	38	39	46				33		21	39	39	40	39	40	19	8	31	30		28	29	39	38	42	39	40	42	40	40	35	35.3
CARRINGTON	MAX	61	61		74	72	65	53	59	59	51	52	58	58	61	62	61		48	57	61	52		51	60	78	73	60	65	62	58	52	60.1
	MIN	37	32		38	40	48	43	41	32	33	33	34	31	31	32	26		20	24	29	27	25	29	30	33	31	31	30	32	40	38	32.8
CARSON 2 SW	MAX	64	70	81	77	69	50	57	60	56	50	67	63	69	68	58	44	54	60	55	51	70	56	66	82	68	65	65	60	53	54	61.8	
	MIN	40	40	43	48	49	39	37	35	25	21	26	34	26	34	41	19	9	28	31	34	25	28	34	35	40	29	25	43	42	32	32.9	
CASSELTON	MAX		89	73	71	70	66	55	66	83	52	50	52	61	65	66	58	44	61	57	55	56	56	58	67	77	69	67	65	61	53	65	61.6
	MIN	33	27	34	46	38	52	42	35	35	41	35	34	34	32	33	31	16	31	22	40	34	24	22	35	37	35	32	29	28	49	42	34.1
CAVALIER POWER PLANT	MAX	61	65	73	71	69	64	65	83	57	50	60	62	64	64	62	49	48	56	58	59	60	59	59	68	69	61	70	62	57	58	61	61.4
	MIN	29	23	34	48	49	51	53	42	35	36	35	34	34	32	42	24	14	31	24	35	25	28	24	35	35	35	32	28	29	45	44	34.3
CENTER	MAX	81	68	79	74	68	56	56	53	51	46	65	58	66	66	55	45	53	64	65	62	68	56	66	81	64	65	61	62	53	52	60	61.3
	MIN	41	30	29	28	43	30	38	32	27	27	25	28	24	23	35	20	18	32	20	26	19	30	18	26	29	30	26	18	39	46	28	28.5
COOPERSTOWN	MAX	59	65	72	72	63	60	62	62	50	50	55	57	59	83	65	48	41	56	57	55	57	52	58	68	77	60	65	60	55	54	61	5

DAILY TEMPERATURES

NORTH DAKOTA

OCTOBER 1948

Table 5-Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
GACKLE	MAX	58	63	73	89	87	83	53	80	53	48	58	59	59	83	56	41	46	57	58	58	60	54	61	65	78	60	62	82	54	52	58	58.8
	MIN	55	34	40		34	40	40	38	29	32	32	34	31	27	32	26	12	30	23	31	24	34	26	33	35	33	34	34	43	48	43	32.8
GARRISON	MAX	81	66	78	74	84	50	59	58	54	52	86	58	85	85	52	33	54	60	64	61	66	30	67	76	67	61	62	80	55	50	58	60.3
	MIN	38	33	38	48	50	40	38	35	28	27	29	32	25	25	36	15	10	20	21	33	28	30	28	30	35	32	32	27	38	42	30	31.5
GRAFTON STATE SCHOOL	MAX	59	62	72	70	88	85	85	85	58	57	81	59	84	64	62	49	38	57	58	60	60	58	59	67	72	62	86	63	60	59	62	61.3
	MIN	51	25	34	47	50	50	50	41	35	37	41	27	31	32	42	25	15	33	19	38	20	39	37	34	34	36	28	31	28	35	44	34.5
GRAND FORKS CAA	MAX	58	83	72	70	67	60	85	85	53	49	58	82	62	65	60	39	39	58	57	57	59	52	58	67	77	61	66	63	56	52	63	59.8
	MIN	28	28	37	49	53	53	48	41	85	38	34	29	33	28	39	19	17	26	21	36	22	27	23	38	32	35	31	32	35	49	35	33.7
GRAND FORKS UNIVERSITY	MAX	56	62	72	70	87	60	65	65	53	49	56	63	61	65	60	42	39	58	56	58	59	52	58	66	76	61	66	63	57	53	53	59.4
	MIN	28	30	37	48	50	51	45	41	35	36	36	30	33	28	40	24	16	28	20	37	22	29	23	38	34	35	32	32	40	48	46	34.6
GRANVILLE	MAX	59	68	80	76	69	60	52	57	52	52	85	57	63	68	53	44	50	57	62	59	65	59	69	82	65	63	59	62	56	54	57	61.1
	MIN	50	26	37	49	50	40	42	36	29	27	28	34	28	27	40	21	9	30	21	32	24	30	28	31	29	27	34	20	31	42	32	31.1
GRENOIRA	MAX	62	68	80	78	74	63	60	55	55	50	67	58	69	70	66	54	58	60	65	62	68	62	68	78	73	62	62	59	58	56	57	63.8
	MIN	37	30	40	52	48	39	24	38	20	20	27	32	28	30	35	19	9	27	28	33	37	24	32	35	41	27	30	23	38	42	29	31.4
HANKINSON RR STATION	MAX	65	57	64	70	67	68	55	59	68	55	50	52	69	58	64	65	40	42	62	57	60	60	54	60	61	74	63	67	65	58	52	60.0
	MIN	34	32	32	41	42	41	45	47	34	30	34	38	34	34	33	33	13	19	27	26	27	27	22	23	34	31	31	30	38	48	39	32.7
HANSBORO	MAX	59	65	73	73	70	58	57	59	51	52	68	54	65	62	54	43	40	53	58	54	59	53	64	74	63	61	63	60	57	49	58	59.0
	MIN	22	23	33	46	48	43	44	40	32	33	35	34	30	31	37	21	10	30	21	24	24	28	22	28	39	31	31	24	28	45	40	31.5
HETTINGER	MAX	62	71	81	79	68	46	60	61	59	56	60	64	71	71	67	45	55	63	67	64	70	60	70	81	74	64	60	52	59	65	64.0	
	MIN	40	37	37	49	45	39	39	35	19	17	20	23	23	29	37	18	5	27	34	30	19	30	32	32	37	30	25	25	26	41	32	30.0
HILLSBORO	MAX	58	64	72	70	68	58	65	67	58	49	57	68	65	66	60	46	41	60	57	58	60	53	59	68	81	63	67	67	58	54	65	61.3
	MIN	33	25	34	48	49	52	50	43	38	38	42	32	36	32	44	27	16	33	23	34	28	37	19	38	33	36	29	37	35	41	42	35.6
JAMESTOWN CAA	MAX	60	68	75	73	77	55	61	64	53	54	55	61	62	64	60	38	46	60	59	59	62	53	60	70	81	64	66	63	57	55	62	61.1
	MIN	30	28	37	46	48	43	46	38	33	33	35	32	32	28	37	16	11	27	19	27	22	25	20	34	33	33	29	32	37	48	33	32.0
JAMESTOWN STATE HOSP	MAX	59	63	75	73	67	58	59	62	52	51	52	60	60	63	59	48	46	58	59	56	60	52	59	70	81	62	64	62	57	55	63	60.2
	MIN	34	28	37	47	48	43	43	39	34	35	36	32	32	30	41	25	12	29	18	27	26	37	20	35	33	34	30	35	37	48	36	33.6
KENMARE	MAX	61	84	87	77	73	62	44	64	57	65	56	67	60	69	64	52	31	54	60	63	62	68	59	65	83	69	65	60	58	59	49	61.2
	MIN	31	34	39	51	51	39	38	38	31	27	29	34	33	31	34	18	12	27	24	32	32	27	29	38	48	27	30	22	24	32	35	32.2
KENSAL WILDLIFE REFUGE	MAX	58	58	70	64	82	55	50	50	41	45	45	60	46	47	56	36	42	53	55	54	52	50	52	55	78	57	56	54	52	50	47	53.2
	MIN	27	25	36	39	47	42	43	35	31	29	31	30	29	24	30	14	9	26	17	25	20	30	21	27	32	31	25	28	31	45	34	30.1
LA MOURE	MAX	80	65	75	74	70	60	60	67	55	52	52	69	62	64	60	49	47	61	58	60	61	54	59	69	80	65	67	64	55	57	68	61.9
	MIN	33	30	36		59	40	40	37	34	31	35	32	32	28	40	25	13	28	19	22	23	36	21	35	31	34	28	34	43	47	32	32.6
LANGDON EXP FARM	MAX	82	64	73	72	66	58	65	61	53	53	65	61	63	63	56	46	35	58	57	59	57	64	60	73	74	66	63	61	62	49	57	60.5
	MIN	21	28	38	45	46	47	48	40	30	33	34	30	26	30	41	20	11	25	22	29	28	30	25	33	37	30	32	24	35	45	43	32.5
LARIMORE	MAX	59	63	72	69	65	60	62	63	51	50	60	59	62	83	60	47	39	57	57	56	59	51	58	66	78	61	66	61	55	53		59.4
	MIN	32	31	37	46	48	51	51	43	34	36	39	36	36	33	43	26	14	35	26	34	25	37	27	31	34	34	34	37	31	48		35.6
LEEDS	MAX	62	68	77	74	66	58	61	59	51	56	63	58	83	84	53	45	57	60	55	59	54	66	78	70	57	65	61	60	50	57	60.6	
	MIN	24	22	38	47	50	44	45	40	29	36	34	32	31	27	41	24	10	30	19	28	24	31	27	35	41	28	32	27	29	48	37	32.6
LINTON	MAX	61	62	78	75	87	61	56	61	55	59																						

DAILY TEMPERATURES

NORTH DAKOTA

OCTOBER 1948

Table 5-Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
NEW ENGLAND	MAX	61	63	72	81	80	60	45	60	59	58	57	64	62	73	71	55	40	55	61	68	62	85	78	80	68	86	63	64	82	82	88	83.8
	MIN	41	39	41	44	48	38	36	35	21	23	22	27	22	27	29	19	6	16	19	30	23	27	28	28	34	23	27	21	41	42	25	29.0
OAKES WATER WORKS	MAX	66	62	69	77	76	71	54	57	68	56	52	54	73	63	67	60	38	47	62	61	84	61	55	83	70	82	67	66	88	55	58	82.5
	MIN	35	32	33	40	48	49	43	40	32	30	37	29	31	30	31	32	14	21	21	22	22	25	19	21	31	32	31	32	38	47	32	31.5
PARK RIVER	MAX	58	63	73	71	66	63	64	63	54	50	62	59	64	65	59	51	38	57	59	58	59	54	60	70	74	61	67	62	57	62	60	60.7
	MIN	30	33	31	44	48	51	50	45	34	37	41	35	34	35	42	26	14	35	26	33	28	38	28	30	43	38	35	35	30	45	45	36.0
PARSHALL	MAX	62	67	79	75	67	52	60	57	52	52	65	58	65	65	61	44	55	57	65	61	71	61	68	76	63	63	59	60	58	52	56	61.5
	MIN	40	29	39	47	50	39	40	33	22	25	20	24	20	21	37	17	4	19	15	32	22	27	30	29	30	27	24	17	34	45	22	28.4
PEMBINA CAA	MAX	58	63	72	71	68	60	65	63	51	48	59	55	62	64	57	36	36	52	57	58	58	50	58	64	70	58	67	62	56	53	60	58.4
	MIN	29	28	39	48	51	51	46	44	36	39	35	29	32	33	36	24	14	30	20	35	29	30	23	38	34	37	30	23	34	48	41	34.4
PETERSBURG	MAX	57	63	71	70	63	57	63	61	50	59	59	56	61	63	59	44	38	55	57	54	57	52	58	73	70	60	65	57	54	51	62	58.7
	MIN	25	31	37	40	48	48	50	40	30	35	35	32	29	33	41	23	10	27	25	30	26	36	24	33	33	30	35	35	35	47	42	33.7
PETTIBONE	MAX	60	65	75	72	65	56	57	59	51	50	60	56	63	64	53	42	47	57	60	56	60	54	65	77	60	61	65	63	55	51	59	59.3
	MIN	37	32	41	46	48	41	40	32	29	34	32	30	29	28	40	24	9	27	20	32	22	33	24	31	37	30	34	33	40	48	32	32.7
PORTAL	MAX	54	60	68	80	73	57	43	60	55	51	65	67	58	64	66	50	30	55	56	64	54	70	54	70	79	60	62	56	58	57	47	59.5
	MIN	21	30	40	44	44	38	34	35	25	26	28	35	28	30	42	15	7	27	27	30	30	21	29	41	40	25	24	21	31	35	31	30.1
POWERS LAKE	MAX	72	72	72	72	65	49	57	56	56	55	75	72	65	61	48	50	55	62	55	57	64	60	63	76	73	55	56	60	62	55	54	61.4
	MIN	30	29	40	48	46	38	37	38	25	25	24	28	24	27	19	25	24	28	24	28	24	28	35	40	24	19	40	40	29	29	30.5	
RICHARDTON ABBEY	MAX	64	69	80	76	68	49	58	57	55	52	67	59	69	68	60	45	53	59	67	62	70	60	69	80	70	64	57	61	52	55	61	62.5
	MIN	40	39	39	45	46	38	35	36	24	25	30	31	27	36	40	17	8	31	28	39	26	34	31	36	38	30	35	30	41	41	34	33.2
RIVERDALE	MAX	61	66	78	75	71	56	58	58	52	50	66	63	64	64	63	49	53	58	63	61	67	64	66	77	66	61	61	61	56	51	57	61.8
	MIN	43	38	42	51	52	40	40	37	31	28	30	36	30	32	41	20	13	33	27	27	28	30	30	35	38	34	35	29	41	46	33	34.5
ROLLA	MAX	56	63	72	71	64	56	58	59	49	51	60	53	61	60	51	42	40	52	55	51	57	52	61	70	60	60	64	57	56	47	55	56.9
	MIN	28	31	35	44	48	43	44	39	33	34	35	35	34	30	34	27	10	12	33	22	28	27	32	38	32	34	34	30	32	45	35	33.6
RUGBY 1 N	MAX	57	65	77	77	69	60	58	60	50	52	62	56	60	63	56	48	49	55	59	55	61	57	67	75	63	56	61	60	60	52	56	59.9
	MIN	23	27	42	48	50	43	44	36	28	36	28	37	26	28	35	22	7	24	20	27	22	29	26	34	35	23	31	29	34	47	32	31.4
SANISH	MAX	64	62	62	82	73	59	46	59	53	52	50	65	53	66	69	53	34	55	58	69	82	72	52	67	77	62	65	59	59	52	60.3	
	MIN	43	33	33	39	46	41	41	32	29	29	22	22	22	25	24	21	6	8	21	21	22	28	32	32	28	25	20	19	42	28	27.9	
SHARON	MAX	61	62	70	70	70	62	63	65	52	50	60	59	64	62	58	45	40	58	55	55	58	55	58	68	79	61	66	60	54	53	64	59.9
	MIN	28	32	35	42	49	54	45	41	35	33	39	33	32	35	40	24	11	28	24	31	27	35	25	36	39	31	31	39	34	47	40	34.7
STANLEY	MAX	61	66	77	73	59	49	58	54	51	52	64	56	65	64	51	36	52	55	63	57	69	55	62	78	77	62	55	58	59	51	60	59.6
	MIN	32	24	36	45	46	37	36	35	23	26	23	31	23	34	33	13	5	25	19	26	24	25	28	29	27	23	30	19	42	40	28	28.0
STEELE	MAX	59	66	75	73	63	57	54	57	60	49	60	60	63	65	54	44	50	60	63	61	63	53	68	76	74	63	67	63	55	52	61	60.9
	MIN	40	34	41	50	54	41	41	28	34	30	28	30	28	28	43	20	8	25	19	30	21	29	25	31	34	29	31	33	38	48	31	32.3
TOWNER	MAX	52	59	66	69	65	68	58	59	52	69	68	63	54	52	58	28	57	62	57	62	68	53	61	64	62	57	56	57	59	58	50	58.8
	MIN	29	25	27	29	27	29	29	25	29	41	26	21	27	27	6	22	30	23	29	29	29	29	28	26	18	30	30	31	29	30	26.9	
TURTLE LAKE	MAX	60	67	78	74	67	60	53	58	52	51	65	60	63	65	54	44	50	59	63	61	63	60	66	76	67	62	64	60	53	52	57	60.8
	MIN	36	33	41	50	51	40	41	35	29	26	28	31	26	23	37	20	11	28	21	34	21	26	25	26	34	30	30	25	36	46	32	31.4
UNDERWOOD 12 W	MAX	61	69	80	75	69	56	58	59	53	50	64	59	65	67	59	49	54	59	64	62	69	63	68	76	65	65	61	62	60	52	62	62.4
	MIN	38	31	39	51	49	40	41	33	34	28	23	27	23	23	36	22	9	36	19	33	21	29	25	39	29	25	27	21	46	46	40	31.7
UPHAM WILDLIFE REFUGE	MAX	59	68	78	76	72	62	52	59</																								

TABLE 6

DAILY EVAPORATION (INCHES) AND WIND MOVEMENT (MILES)

NORTH DAKOTA
OCTOBER 1948

STATION		DAY OF MONTH																															TOTAL	DEPART URE FROM NORMA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
DICKINSON EXP STATION	EVAP	.070	.055	.148	.147	.130	.035	.158																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</

TABLE 7

DAILY RIVER STAGES (FEET)

RIVER AND STATION		FLOOD STAGE	DAY OF MONTH																															HIGHEST (OR CREST)	DATE	LOWEST	DATE
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
MISSOURI																																					
WILLISTON L C BRIDGE		20	6.5	6.6	6.5	6.5	6.5	6.4	6.3	6.2	6.2	6.2	6.1	6.0	5.9	5.7	5.8	5.8	5.8	5.7	5.6	5.6	5.7	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.7	5.60	2	5.6	20		
BISMARCK WATER WORKS		19	8.8	8.6	8.5	8.6	8.7	8.8	8.8	8.5	8.4	8.4	8.3	8.2	8.2	8.1	8.2	8.2	8.1	8.3	8.3	8.2	8.2	8.1	8.1	8.2	8.3	8.3	8.3	8.3	8.1	8.82	6	8.1	23		

Readings are made at approximately 7 A. M. (local time). They are provisional and subject to correction. Final and corrected stages will be published in the annual publication "Daily River Stages - Principal Rivers of the United States". The following reference notes apply only to Table 7, Daily River Stages:

- | | | | |
|---|------------------------------|---|---------------|
| a | Obstructed by rough ice. | f | Shore ice. |
| b | Frozen but open at gage. | g | Floating ice. |
| c | Upper surface of smooth ice. | h | Pool stage. |
| d | Ice gorge above gage. | i | Dry at gage. |
| e | Ice gorge below gage. | j | Interpolated. |

NORTH DAKOTA

OCTOBER 1948

STATION INDEX

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT. O /	LONG. O /	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
ADAMS 7 S	0022	WALSH	RED	48 20	98 06		CST		7A				MYRA J BOTA	3
ALEXANDER RR STATION	0096	MC KENZIE	YELLOWSTONE	47 50	103 38	1200	MST		8A		8		ARTHUR J BAUMAN	3
ALMONT 7 W	0136	MORTON	HEART	46 43	101 39	2300	MST	7P	7P	6	6		HOGAN RAMSLAND	2 3 5
ALPHA 1 S	0149	GOLDEN VALLEY	LIT MISSOURI	46 37	103 49		MST		7P		23		H A BURY	3
AMIDON	0209	SLOPE	CANNONBALL	46 29	103 19	2908	MST	5P	7P	27	27		STANLEY W BOLE	2 3 5
ARVILLA STATE PARK	0369	GRAND FORKS	RED	47 56	97 30	960	CST	6P	6P	5	5		ALBERT THOREN	2 3 5
ASRLFY	0382	MC INTOSH	MISSOURI	46 02	99 22	2025	CST	8A	8A	53	53		W E DREY	2 3 4 5
BALDRILL DAM	0450	BARNES	SHEYENNE	47 02	98 05	1300	CST	8A	8A	1	1		F A JOHNSON	2 3 5
BALFOUR RR STATION	0492	MC HENRY	SOURIS	47 57	100 32		CST		MID		8		C G THOMSON	3 4
BELCOURT INDIAN RES	0626	ROLETTE	PEMBINA	48 50	99 45	1960	CST	7P	7P	4	4		TURTLE MT INDIAN AG	2 3 5
BELFIELD	0639	STARK	HEART	46 52	103 11	2592	MST	7P	7P	31	31		CARL Indergaard	2 3 5
BEULAH	0766	MERCER	KNIFE	47 16	101 47	1780	MST		7P		34		KNIFE RIVER COAL MNG	3
BISBEE	0796	TOWNER	DEVILS LAKE	48 37	99 22	1601	CST	6P	6P	46	46		ROBERT L PETERSON	2 3 5
BISMARCK WATER WORKS	0809	BURLEIGH	MISSOURI	46 49	100 49	1628	CST		7A				BISMARCK WATER PLANT	3
BISMARCK WB CITY	0814	BURLEIGH	MISSOURI	46 48	100 48	1670	CST	10A	10A	74	74		U S WEATHER BUREAU	2 3 5
BISMARCK WB AIRPORT	0819	BURLEIGH	MISSOURI	46 46	100 45	1650	CST	MID	MID	9	9		U S WEATHER BUREAU	2 3 4 5
BOTTINEAU	0941	BOTTINEAU	SOURIS	48 50	100 27	1638	CST	4P	4P	57	57		N D SCHOOL OF FRSTRY	2 3 5
BOTTINEAU STATE PARK	0946	BOTTINEAU	SOURIS	48 56	100 22	2160	CST	6P	6P	5	5		PARK SUPT	2 3 5
BOWBELLS RR STATION	0961	BURKE	SOURIS	48 48	102 15	1958	CST	8A	8A	23	23		CHARLES KAUFMAN	2 3 5
BOWMAN COURT HOUSE	0995	BOWMAN	GRAND	46 11	103 23	2872	MST	5P	5P	34	34		O B HOOK	2 3 4 5
BREIEN	1052	NORTON	CANNONBALL	46 23	100 57	1719	CST		8A				MELVIN NELSON	2 3
BUTTE	1225	MC LEAN	SOURIS	47 50	100 40	1740	CST	6P	6P	24	24		M O ANDERSON	2 3 5
CARRINGTON	1360	FOSTER	JAMES	47 27	99 08	1579	CST	7A	7A	51	51		SOO LINE AGENT	2 3 5
CARSON 2 SW	1370	GRANT	HEART	46 23	101 35	2500	MST	7P	7P	37	37		J W EVENS	2 3 5
CASSELTON	1400	CASS	RED	46 54	97 13	934	CST	5P	5P	53	53		WALLACE G SWEENEY	2 3 5
CAVALIER POWER PLANT	1435	PEMBINA	PEMBINA	48 48	97 38	894	CST	5P	5P	13	41		CITY LIGHT & POWER	2 3 5
CENTER	1456	OLIVER	MISSOURI	47 07	101 18	2100	MST	7P	7P	11	11		FRED L HEINZ	2 3 5
COCSEWELL 6 W	1525	SARGENT	JAMES	46 07	97 55	1291	CST		7A		4		JOHN WADDAHL	3
COLGATE	1686	STEELE	RED	47 14	97 39	1180	CST		6P		15		O M JENSEN	2 3 5
COOPERSTOWN	1766	GRIGGS	SHEYENNE	47 26	98 07	1428	CST	5P	5P	52	52		R J LOCKNER	2 3 5
COURTENAY	1816	STUTSMAN	JAMES	47 13	98 34	1523	CST		6P		15		G R HANAWALT	3
CROSBY	1871	DIVIDE	SOURIS	48 54	103 18	1954	CST	7A	7A	42	42		VERNON V NICHOLS	2 3 5
DAWSON	2018	KIDDER	MISSOURI	46 52	99 45	1730	CST		MID		8		LOUIS J BILLINGTON	3 4
DEVILS LAKE WB CITY	2158	RAMSEY	DEVILS LAKE	48 07	98 52	1471	CST	MID	MID	44	73		U S WEATHER BUREAU	2 3 4 5
DICKINSON CAA	2183	STARK	HEART	46 48	102 48	2587	MST	MID	MID	8	8		CAA	2 3 4 5
DICKINSON EXP STATION	2188	STARK	HEART	46 53	102 48	2460	MST	7A	7A	57	57		LEROY MOOMAW	2 3 5 6
DRAKE	2298	MC RENRY	SOURIS	47 55	100 22	1634	CST	7A	7A	19	19		GEORGE A PAULUS	2 3 5
DUNN CENTER	2365	DUNN	KNIFE	47 21	102 37	2191	MST	6A	6A	50	50		FRANK R SOMMARS	2 3 5
DUNSEITH ST SANITARIUM	2385	ROLETTE	SOURIS	48 50	100 02	2001	CST	5P	5P	53	53		STATE TUBERCULOSIS	2 3 5
ECKMAN	2472	BOTTINEAU	SOURIS	48 39	101 03	1500	CST	7A	7A	43	43		E R SRERMAN	2 3 5
EDGELEY EXP FARM	2482	LA MOURE	JAMES	46 20	98 42	1568	CST	6P	6P	48	48		N D AGRI EXP	2 3 5
EDMORE 1 W	2525	RAMSEY	DEVILS LAKE	48 25	98 29	1524	CST	8P	8P	25	25		MIKE DAVIS	2 3 5
ELBOWOODS	2570	MC LEAN	MISSOURI	47 35	102 09	2082	CST	6P	6P	56	56		H W CASE	2 3 5
ELLENDALE NORMAL SCR	2605	DICKEY	JAMES	46 00	98 31	1457	CST	8P	8P	50	50		J E DEMMER	2 3 5
EPPING	2735	WILLIAMS	MISSOURI	48 18	103 21	2224	CST	6P	6P	40	40		T BEACHLER	2 3 5
FAIRFIELD 9 N	2809	BILLINGS	LIT MISSOURI	47 19	103 12	2650	MST		6P		21		MRS EDITH LARSON	3
FARGO WB AIRPORT	2859	CASS	RED	46 54	96 48	895	CST	MID	MID	68	68		U S WEATHER BUREAU	2 3 4 5
FESSENDEN	2949	WELLS	JAMES	47 39	99 37	1610	CST	6P	6P	37	37		JOHN V ZUBER	2 3 5
FORMAN	3117	SARGENT	RED	46 06	97 38	1249	CST	6P	6P	57	57		ART WATERMAN	2 3 5
FORT YATES	3207	SIoux	MISSOURI	46 05	100 38	1670	MST	6P	6P	49	49		P J JACOBSON	2 3 5
FOXROLM WILDLIFE REF	3217	WARD	SOURIS	48 27	101 33	1609	CST	5P	5P	24	28		U S WILDLIFE REF	2 3 5
FULLERTON	3287	DICKEY	JAMES	46 10	98 25	1439	CST	6P	6P	51	51		F O ALIN	2 3 5
GACKLE	3309	LOGAN	JAMES	46 38	99 08	1951	CST	6P	6P	18	18		DAVID R HAMM	2 3 5
GARRISON	3376	MC LEAN	MISSOURI	47 38	101 25	1911	CST	MID	MID	72	72		MAE N VORACHEK	2 3 4 5
GLEN ULLIN	3496	MORTON	HEART	46 49	101 49	2090	MST		MID		8		NICK GAUER	3 4
GOLVA	3556	GOLDEN VALLEY	LIT MISSOURI	46 44	103 59	2781	MST	7P	6A	8	8		CHESTER K PUDA	2 3 5
GRAFTON STATE SCHOOL	3594	WALSH	RED	48 25	97 26	827	CST	5P	5P	57	57		DR J C LAMONT	2 3 5
GRAND FORKS CAA	3616	GRAND FORKS	RED	47 56	97 05	834	CST	MID	MID	8	8		CAA	2 3 4 5
GRAND FORKS UNIVERSITY	3621	GRAND FORKS	RED	47 55	97 05	830	CST	MID	7P	58	58		UNIVERSITY OF N D	2 3 5
GRANO	3676	RENVILLE	SOURIS	48 37	101 35	1625	CST		MID				ALVIN C REINKE	3 4
GRANVILLE	3686	MC RENRY	SOURIS	48 16	100 51	1504	CST	7P	7P	42	42		FRED ROBLE	2 3 5
GRENORA	3736	WILLIAMS	MISSOURI	48 37	103 56	2114	CST	5P	5P	40	40		L D NIELSON	2 3 5
HALLIDAY	3846	DUNN	KNIFE	47 21	102 20	2073	MST		6P		7		JOHN KISSE	3
RANKINSON RR STATION	3908	RICHLAND	RED	46 04	96 54	1068	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
HANNAFORD	3926	GRIGGS	SHEYENNE	47 18	98 12	1428	CST		MID		8		HOMER A BENSON	3 4
HANNAH	3936	CAVALIER	PEMBINA	48 59	98 41	1568	CST	6P	6P	55	55		A E PRIOR	2 3 5
HANSBORO	3963	TOWNER	PEMBINA	48 57	99 23	1597	CST	7P	7P	41	41		W E DISHER	2 3 5
HARVEY WATER WORKS	4013	WELLS	SHEYENNE	47 45	99 53	1596	CST		6P		46		H J REYNOLDS	3
HAZELTON RR STATION	4083	EMMONS	MISSOURI	46 29	100 17	1978	CST		MID		8		EPHRAIM ZACHER	3 4
HETTINGER	4178	ADAMS	GRAND	46 00	102 38	2675	MST	6P	6P	42	42		EDGAR MARTIN	2 3 5
HURDSFIELD	4343	WELLS	JAMES	47 27	99 55	1915	CST		MID		8		ED BENSHOOF	3 4
JAMESTOWN CAA	4413	STUTSMAN	JAMES	46 55	98 41	1497	CST	MID	MID	8	8		CAA	2 3 4 5
JAMFSTOWN STATE HOSP	4418	STUTSMAN	JAMES	46 53	98 40	1457	CST	7P	7P	57	57		N D STATE HOSPITAL	2 3 5
KENMARE	4646	WARD	SOURIS	48 40	102 05	1799	CST	MID	MID	17	17		THEO E ECKBERG	2 3 5
KENSAL WILDLIFE REFUGE	4656	STUTSMAN	JAMES	47 15	98 52	1440	CST	7P	7P	8	8		U S WILDLIFE REF	2 3 5
KRAMER 5 SE	4823	BOTTINEAU	SOURIS	48 39	100 37		CST		MID		9		PAUL A KRETSCHMAR	3 4
LA MOURE	4937	LA MOURE	JAMES	46 21	98 18	1382	CST	7P	7P	2	2		ANDREW REMICK	2 3 5
LANGDON EXP FARM	4958	CAVALIER	PEMBINA	48 45	98 21	1615	CST	5P	5P	53	53		V STURLAUGSON	2 3 5
LARIMORE	5013	GRAND FORKS	RED	47 54	97 38	1134	CST	7P	7P	56	56		JESSE P PHILLIPS	2 3 5
LEEDS	5078	BENSON	DEVILS LAKE	48 17	99 26	1515	CST	7P	7P	8	8		JOHN FAGAN	2 3 5
LINTON	5210	EMMONS	MISSOURI	46 16	100 14	1711	CST	8P	8P	32	32		WM REYERMAN	2 3 5
LISBON	5220	RANSOM	SHEYENNE	46 26	97 41	1091	CST	7A	7A	45	45		ROBERT M JODSAAS	2 3 5
MADDOCK ACR SCHOOL	5434	BENSON	SHEYENNE	47 58	99 30	1604	CST	6P	6P	34	34		BENSON CY A & T	2 3 5
MANDAN FT STATION	5479	MORTON	HEART	46 48	100 54	1750	CST	8A	8A	35	35		NO GT PLAINS FIELD	2 3 4 5 6
MANDAN FT LINCOLN PARK	5484	MORTON	MISSOURI	46 47	100 52	1700	MST	6P	6P	5	5		ISADORE W SMITH	2 3 5

STATION INDEX - Continued

NORTH DAKOTA

OCTOBER 1948

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT.		LONG.	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
				O	'	O		ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
MANNING	5519	DUNN	KNIFE	47	14	102 46		MST		6P		8		MISS JEANETTE S DAWES	3
MARMARTH	5573	SLOPE	LIT MISSOURI	46	18	103 55	2714	MST	6P	6P	36	40		S P GRANE	2 3 5
MAX	5638	MC LEAN	MISSOURI	47	49	101 17	2093	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
MAYVILLE	5660	TRAIL	RED	47	30	97 19	975	CST	6P	6P	53	53		H A RAGAZ	2 3 5
MC CLUSKY	5710	SHERIDAN	MISSOURI	47	29	100 29	1943	CST	11A	11A	24	31		J A HAMILTON	2 3 5
MC GREGOR RR STATION	5720	WILLIAMS	MISSOURI	48	36	102 56		CST		MID		8		HARTVIN H HERMANSON	3 4
MC HENRY 5 N	5730	EDDY	SHEYENNE	47	38	98 35	1509	CST	8P	8P	26	26		C E BLASKY	2 3 5
MC LEOD 3 E	5754	RICKLAND	SHEYENNE	46	24	97 14	1075	CST	7P	7P	37	37		J G CARLSON	2 3 5
MC VILLE	5764	NELSON	RED	47	46	98 11	1467	CST		6P		5		H H KNIEFEL	3
MEDINA 1 W	5798	STUTSMAN	MISSOURI	46	53	99 19		CST		6P		8		RUDOLPH GRAF	3
MEDORA STATE PARK	5808	BILLINGS	LIT MISSOURI	46	55	103 33	2271	MST	5P	5P	5	34		HARRY ROBERTS	2 3 5
MEDORA TRNMP	5813	BILLINGS	LIT MISSOURI	46	58	103 30	2250	MST	5P	5P				T ROOSEVELT NAT PARK	2 3 5
MILNOR	5933	SARGENT	RED	46	16	97 28	1117	CST	6P	6P	6	6		E W WILSON	2 3 5
MINOT CAA	5988	WARD	SOURIS	48	15	101 17	1724	CST	MID	MID	53	53		CAA	2 3 4 5
MINOT EXP FARM	5993	WARD	SOURIS	48	10	101 18		CST	6P	6P	3	3		N C AGRI EXP ST	2 3 5
MOFFIT RR STATION	6015	BURLEIGH	MISSOURI	46	41	100 18	1760	CST		9A		6		SOO LINE AGENT	3
MOHALL	6025	RENVILLE	SOURIS	48	46	101 31	1639	CST	9P	9P	55	55		IVER JOHNSON	2 3 5
MONTPELIER	6105	STUTSMAN	JAMES	46	42	98 35		CST		8A		8		ROLF HANSON	3
MOTT RR STATION	6155	HETTINGER	CANNON BALL	46	22	102 20	2440	MST	6P	6P	42	42		NORTHERN PACIFIC AGT	2 3 4 5
MUNICH 4 SW	6195	CAVALIER	DEVILS LAKE	48	38	98 53	1598	CST	7P	7P	1	1		HAROLD FELDNER	2 3 5
NAPOLEON 2 SE	6255	LOGAN	MISSOURI	46	28	99 43	1955	CST	7P	7P	57	57		GLADYS J PETERSON	2 3 5
NEW ENGLAND	6315	HETTINGER	CANNONBALL	46	33	102 52	2621	MST	8A	8A	57	57		ADNA S HATCH	2 3 5
NEW SALEM 1 S	6365	MORTON	HEART	46	50	101 25	2163	MST	6P	6P	45	45		WM F GAEBE	2 3 5
OAKES WATER WORKS	6620	DICKEY	JAMES	46	08	98 05	1318	CST	8A	8A	20	20		C M HAGEN	2 3 4 5
OMEMEE 3 SE	6703	BOTTINEAU	SOURIS	48	39	100 20		CST		MID		8		ARTHUR B VOLLMER	3 4
PARK RIVER	6857	WALSH	RED	48	23	97 45	998	CST	5P	5P	45	45		MARTIN SEVERSON	2 3 5
PARSHALL	6867	MOUNTRAIL	MISSOURI	47	57	102 08	1929	CST	6P	6P	17	34		C E SHUBERT	2 3 5
PEMBINA CAA	6947	PEMBINA	RED	48	57	97 15	792	CST	MID	MID	75	75		CAA	2 3 4 5
PETERSBURG	7027	NELSON	RED	48	01	98 00	1524	CST	7P	7P	5	18		F C OVERLAND	2 3 5
PETTIBONE	7047	KIDDER	MISSOURI	47	07	99 31	1856	CST	7P	7P	40	40		L H DETHLOFF	2 3 5
PORTAL	7201	BURKE	SOURIS	49	00	102 33	1954	CST	9A	9A	35	35		U S CUSTOMS SER	2 3 5
POWERS LAKE	7281	BURKE	MISSOURI	48	34	102 39	2205	CST	5P	5P	23	44		E J LEWIS	2 3 5
PRETTY ROCK	7311	GRANT	CANNONBALL	46	11	101 51		MST		6P		8		FREDA LEER	3
RAUB	7405	MC LEAN	MISSOURI	47	44	102 04		CST		MID		8		ALVIN LARSON	3 4
RICHARDTON ABBEY	7530	STARK	HEART	46	53	102 19	2467	MST	7P	7P	33	33		ASSUMPTION ABBEY	2 3 5
RIVERDALE GARRISON DAM	7585	MC LEAN	MISSOURI	47	30	101 24	1910			MID				CORPS OF ENGINEERS	2 3 4 5
ROLLA	7664	ROLETT	PEMBINA	48	52	99 37	1860	CST	7P	7P	11	11		THEO B FAGERLUND	2 3 5
RUGBY 1 N	7704	PIERCE	SOURIS	48	23	100 00	1542	CST	9P	9P	1	20		BOYD C HAWK	2 3 5
RYDER	7749	WARD	MISSOURI	47	55	101 40	2108	CST		9A		20		S C SCHELLENBAUM	3
SANISH	7834	MOUNTRAIL	MISSOURI	47	59	102 32	1835	CST	7A	7A	23	23		H J BUGGE	2 3 5
SARLES 3 E	7844	CAVALIER	PEMBINA	48	55	98 56		MST		MID		8		EARLE M TRELEAVEN	3 4
SEARING	7944	MC KENZIE	YELLOWSTONE	47	34	103 48		MST		MID		8		GLENN S MC RAE	3 4
SELFRIDGE	7952	SIoux	MISSOURI	46	02	100 56	2183	MST		7P		12		J B SMITH	3
SHARON	7986	STEELE	RED	47	36	97 54	1516	CST	8P	8P	22	25		HUGH LYON	2 3 5
SHERWOOD	8047	RENVILLE	SOURIS	49	00	101 38	1647	CST		6P		1		U S CUSTOMS & IMM SER	3
STANLEY	8276	MOUNTRAIL	MISSOURI	48	19	102 24	2258	CST	7P	7P	11	11		LEROY EDWARDS	2 3 5
STEELE	8366	KIDDER	MISSOURI	46	51	99 55	1857	CST	8P	8P	55	55		LEON V LESHNER	2 3 5
TAGUS	8627	MOUNTRAIL	MISSOURI	48	20	101 56	2179	CST		6P		20		GEORGE N PILGARD	3
TIMMER	8727	MORTON	CANNONBALL	46	22	101 00	1742	MST		8A		11		JENNIE GIFFORD	3
TIOGA	8737	WILLIAMS	MISSOURI	48	24	102 56	2279	CST		6P		20		L A SIMON	3
TOWNER	8792	MC HENRY	SOURIS	48	21	100 24	1482	CST	7P	7P	47	47		AUGUST B RIEDER	2 3 5
TROTTERS	8807	GOLDEN VALLEY	YELLOWSTONE	47	20	103 54	2419	MST		5P		23		WALTER GRUNEWALD	3
TURTLE LAKE	8840	MC LEAN	MISSOURI	47	31	100 53	1899	CST	8P	8P	35	35		A S HAAS	2 3 5
TUTTLE 8 SW	8850	KIDDER	MISSOURI	47	02	100 04	1936	CST		8P		40		ADAM LENO	3
UNDFRWOOD 11 SW	8877	MC LEAN	MISSOURI	47	25	101 22	1750	CST	6P	6P	24	37		H S SOLENBERGER	2 3 5
UPHAM WILDLIFE REFUGE	8913	MC HENRY	SOURIS	48	37	100 44	1425	CST	5P	5P	8	8		U S WILDLIFE REF	2 3 5
VALLEY CITY	8937	BARNES	SHEYENNE	46	55	98 00	1229	CST	6P	6P	44	44		MISS I C ROBERTSON	2 3 5
VAN HOOK	8970	MOUNTRAIL	MISSOURI	47	57	102 21	1864	CST	9P	9P	8	8		ERWIN A VENTSCH	2 3 5
VELVA	8990	MC HENRY	SOURIS	48	03	100 55	1511	CST	6P	6P	22	22		OSCAR ANDERSON	2 3 5
VERONA	9035	LA MOURE	JAMES	46	22	98 04		CST		10A		8		LOUIS J MANDSON	3
WAHPETON POWER PLANT	9095	RICHLAND	RED	46	17	96 36	962	CST		MID		8		NEWTON O JONES	3 4
WAHPETON STATE SCHOOL	9100	RICHLAND	RED	46	16	96 36	962	CST	5P	5P	57	57		STATE SCH OF SCIENCE	2 3 5
WALHALLA	9155	PEMBINA	PEMBINA	48	56	97 55	966	CST		7P		8		PETER PAULUS	3
WASHBURN	9195	MC LEAN	MISSOURI	47	17	101 02	1731	CST	6P	6P	46	46		FRED F JEFFERIS	2 3 5
WATFORD CITY	9233	MC KENZIE	MISSOURI	47	48	103 17	2084	CST	8P	8P	36	36		J C ZELLER	2 3 5
WESTHOPE	9333	BOTTINEAU	SOURIS	48	55	101 01	1508	CST	6P	6P	43	43		REV R CAREY	2 3 5
WILDROSE	9400	WILLIAMS	MISSOURI	48	38	103 10	2258	CST		6P		19		JONATHAN WINKJER	3
WILLISTON L C BRIDGE	9420	WILLIAMS	MISSOURI	48	07	103 44		CST						U S WEATHER BUREAU	7
WILLISTON WB CITY	9425	WILLIAMS	MISSOURI	48	09	103 35	1877	CST	MID	MID		70		U S WEATHER BUREAU	2 3 4 5
WILLOW CITY	9445	BCTTINEAU	SOURIS	48	36	100 17	1471	CST	8P	8P	57	57		O M SANDERSON	2 3 5
WILTON RR STATION	9455	MC LEAN	MISSOURI	47	09	100 48	2159	CST	8A	8A	14	14		SOO LINE AGENT	2 3 5
WISHEK	9515	MC INTOSH	MISSOURI	46	16	99 34	2010	CST	8A	8A	28	28		H M LARSON	2 3 5
WASHBURN POWER PLANT	9200	MC LEAN	MISSOURI	47	17	101 02		CST							
HILLSBORO	4203	TRAIL	RED	47	24	97 04	901	CST	6P	6P	43	43		ALFRED JAHNKE	2 3 5

NORTH DAKOTA
OCTOBER 1948

REFERENCE NOTES

The four digit identification numbers in the index number column of the Station Index are assigned on a State basis. There will be no duplication of numbers within a State.

Figures and letters following a station name indicate the distance in miles and direction from the post office of the same name.

Stations appearing in the Index, but for which data are not listed in the tables, are either missing or received too late for inclusion in this issue.

Delayed data and corrections will be carried only in the June and December issues of this bulletin.

Data in Tables 3, 5 and 6 are for the 24 hours ending at time of observation. See the Station Index for observation time.

When hourly precipitation is missing for several days, only the first and last days are shown in Table 4.

When hourly precipitation is accumulated over a period of 3 or more calendar days, with unknown hourly or daily distribution, the first and last days are shown in Table 4.

Unless otherwise indicated, dimensional units used in this bulletin are: Temperature in °F., precipitation and evaporation in inches, river stages in feet and wind movement in miles.

-	No record.
+	And also on later dates.
*	Amount included in following measurement. Time distribution unknown.
//	Gage is equipped with wind shield.
6	No recording gage, precipitation measured at 6-hourly intervals.
B	Adjusted to a full month.
E	Water - equivalent of snowfall wholly or partially estimated, using a ratio of 1 inch water equivalent to every 10 inches of new snowfall.
M	One or more days of record missing. See Table 5 for detailed daily record.
R	Station equipped with recording gage only. All amounts in Table 3 are for the non-recording gages, except for stations with this reference.
SS	This entry in time of observation column in Station Index means sunset.
T	Trace, an amount too small to measure.
X	Daily totals are for the 24 hours ending at 1:30 A.M. EST of the following day.
Z	Hourly amounts from recording gage at the same site may be found in Table 4.

Table 4 data were formerly published in Hydrologic Bulletins for Missouri River and Upper Mississippi District. Amounts in this table are from recording gages. Traces are not shown.

Subscription Price: 15¢ per copy; \$1.50 a year. (Yearly subscription includes Annual Summary. Correspondence regarding subscriptions should be addressed to The Weather Records Processing Center, 1300 U. S. Court House, Chicago 4, Illinois).

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CLIMATOLOGICAL DATA

NORTH DAKOTA

NOVEMBER 1948

Volume LVII No.11



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NORTH DAKOTA - NOVEMBER, 1948

F. J. Bavendick, Section Director - Bismarck

GENERAL SUMMARY

The temperature averaged more than 2° above normal during November with the greatest departures occurring in the central and western portions. High temperatures ranged in the sixties at various places in the southern half of the state during the early part of the month. The lowest temperatures for the month ranged from well below zero in northern portions to generally above zero in the remainder of the state. Nearly all of the subzero readings occurred on the 28th. Cloudiness averaged above normal for the month, with sunshine about 10% below normal.

Precipitation averaged above normal with plus departures smallest in the eastern division and greatest in the western division. During the first part of the month the moisture was mostly in the form of rain with some freezing drizzle and sleet which made roads slippery and hazardous. Some damage to power and telephone lines occurred. Rather heavy snow fell in the southeast portion with seven inches recorded at Fargo on the 13th. The north-central and north-eastern portions of the state received heavy snow on the 24th and 25th with amounts of six to eleven inches on the ground reported at most places. Precipitation averaged .90 inch in the eastern division, 1.13 inches in the central division and 1.32 inches in the western division. The precipitation all soaked into the ground and soil moisture, especially in the central and western sections was generally good.

The weather generally was quite mild most of the month, except full winter conditions prevailed over northern and northeastern portions during the last week. Livestock were generally in good condition with adequate feed. Feeding of livestock was mostly done under shelter in the northern portion of the state by the end of the month.

TEMPERATURE

The mean temperature for the state was 29.4°, which is 2.8° above normal for the month. The monthly mean temperatures ranged from 33.7° at Fort Yates to 23.3° at Belcourt. The highest temperature recorded in the state was 68° at Oakes on the 1st and the lowest -19° at Belcourt on the 28th.

PRECIPITATION

The average precipitation for the state was 1.11 inches, which is 0.49 inch above normal for November. The total amounts recorded at various stations ranged from 2.22 inches at Portal to 0.10 inch at Cogswell. The heaviest rainfall reported in any one day was 0.91 inch at Bowbells on the 25th. The monthly average of snowfall was 3.9 inches or 0.8 inch less than normal. The greatest monthly amount was 15 inches at Bottineau; the least a trace at scattered stations. The greatest depth on the ground was 11 inches at Belcourt on the 25th.

ACKNOWLEDGMENTS

In addition to the climatological data from some 6,000 Weather Bureau and cooperative weather stations, this bulletin series contains records from Hydroclimatic Network Stations which were formerly reproduced in the Hydrologic Bulletin Series. The Hydroclimatic Network is a nationwide net of rain gages -- mostly of the recording type which produce continuous records of precipitation. It was established in 1939 at the request of the Corps of Engineers, Department of the Army, to supplement existing precipitation stations in order to provide records of rainfall intensity which were essential to the planning of flood control and related works by the Corps of Engineers. This Network, now numbering about 2,000 recording, and 1,000 non-recording rain gages, has been maintained by the Weather Bureau through working funds transferred annually to the Weather Bureau by the Corps of Engineers. These transfers averaged about \$250,000 per year between 1940 and 1944, and nearly \$375,000 since that date. For the years 1940-42, the Department of Agriculture transferred about \$100,000 per year to provide data required in its work, and since 1947 the Bureau of Reclamation has transferred about \$25,000 per year to meet the increasing needs of their program in the Western States.

Previous to the introduction of this bulletin series, data from Hydroclimatic Network stations were presented in bulletins (Hydrologic Bulletins) which were issued monthly for each of 8 drainage areas embracing the entire United States, but since the Network was established to meet the internal requirements of the Federal agencies referred to above, no provision was made for public dissemination of the data, distribution being limited to cooperating agencies and to certain public repositories. A list of locations where reference copies of the Hydrologic Bulletin Series are available for inspection may be obtained upon application to Chief, U.S. Weather Bureau, Washington 25, D. C.

Many other records published in this bulletin have been made available through the cooperation of various public offices, private agencies, and individuals as listed in the Station Index.

PRESSURE, WIND, HUMIDITY, SUNSHINE, DEGREE DAYS

NORTH DAKOTA
NOVEMBER 1948

STATIONS	SEA LEVEL PRESSURE EXTREMES—INCHES				WIND				RELATIVE HUMIDITY AVERAGES				SUN- SHINE	DEGREE DAYS 65° BASE
	HIGHEST	DATE	LOWEST	DATE	AVERAGE SPEED M.P.H.	MAXIMUM SPEED M.P.H.	DIRECTION	DATE	1:30A EST	7:30A EST	1:30P EST	7:30P EST	PERCENT OF POSSIBLE	
BISMARCK AIRPORT	30.45	18	29.28	24	11.1	37	NW	29	86	88	70	77	38	1006
DEVILS LAKE	30.50	18	29.40	24	8.7	27	NW	6	-	87	80	79	40	1138
FARGO AIRPORT	30.35	28	29.43	25	12.7	35	NW	6	88	91	80	84	19	1080
WILLISTON	30.44	18	29.25	24	7.1	27	NW	13	84	87	74	75	39	1008

TABLE 1
COMPARATIVE DATA

YEAR	TEMPERATURE			PRECIPITATION			
	MEAN	HIGHEST	LOWEST	AVERAGE		AVERAGE SNOWFALL	DAYS WITH .01 OR MORE
1892	22.3	75	-26	0.79		7.4	4
1893	22.4	74	-27	0.57		4.6	3
1894	23.1	71	-25	0.47		2.6	4
1895	20.6	76	-25	1.09		8.2	5
1896	8.1	62	-32	2.23		21.7	9
1897	20.0	86	-28	0.32		2.8	3
1898	23.0	69	-30	0.34		3.1	3
1899	36.0	68	2	0.31		1.0	2
1900	20.4	64	-29	0.32		5.2	5
1901	26.8	70	-7	0.13		1.6	1
1902	29.6	69	-12	0.24		1.9	3
1903	25.3	78	-20	0.26		2.5	2
1904	35.7	80	-10	0.09		0.7	1
1905	31.6	88	-38	1.36		11.0	9
1906	23.8	68	-16	1.49		10.2	7
1907	30.2	85	-15	0.08		0.7	1
1908	31.1	75	-15	0.94		8.2	4
1909	29.4	88	-23	0.48		4.6	3
1910	23.9	68	-23	0.40		3.2	2
1911	16.7	58	-33	0.64		7.1	6
1912	31.8	70	1	0.07		0.5	1
1913	34.1	77	-2	0.22		1.6	2
1914	30.7	83	-30	0.33		2.6	2
1915	28.1	71	-10	0.95		3.7	4
1916	28.8	75	-18	0.27		1.7	2
1917	36.8	77	-7	0.13		1.4	1
1918	28.9	71	-18	0.96		5.3	4
1919	15.6	57	-36	1.15		11.8	5
1920	28.0	65	-14	0.34		2.1	3
1921	21.0	69	-30	0.69		6.3	5
1922	31.8	65	-8	2.24		6.3	6
1923	36.5	72	-5	0.47		0.6	3
1924	27.6	69	-15	0.18		1.9	2
1925	28.8	69	-17	0.24		1.3	2
1926	21.5	68	-23	0.62		6.2	5
1927	20.7	59	-24	0.69		7.1	6
1928	31.0	70	-11	0.48		0.2	1
1929	24.8	70	-21	0.53		5.2	5
1930	29.4	72	-21	0.87		6.2	5
1931	30.3	78	-10	0.55		5.0	3
1932	25.2	70	-17	0.51		4.6	4
1933	28.3	78	-15	0.65		6.6	5
1934	33.9	73	-1	0.28		1.0	3
1935	17.2	57	-25	0.73		8.1	6
1936	28.0	69	-28	0.34		4.0	4
1937	25.2	73	-25	0.41		3.5	4
1938	23.8	75	-21	0.87		7.9	6
1939	34.9	74	-4	0.03		T	1
1940	22.0	59	-28	0.59		7.1	6
1941	30.5	69	-17	0.26		3.6	5
1942	28.0	73	-14	0.18		1.5	3
1943	28.7	63	-4	0.44		4.2	4
1944	27.1	70	-21	2.25		8.8	9
1945	22.3	75	-26	0.48		5.3	4
1946	25.3	68	-22	0.35		3.3	4
1947	22.5	63	-19	1.05		11.1	9
1948	29.4	68	-19	1.11		3.9	8
PERIOD	26.6	88	-38	0.62		4.7	4

CLIMATOLOGICAL DATA

NORTH DAKOTA

NOVEMBER 1948

Table 2

Station	Temperature						Precipitation											
	Average	Departure from Normal	Highest	Date	Lowest	Date	No. of Days		Total	Departure from Normal	Greatest Day	Date	Snow, Sleet, Hail			No. of Days		
							Max 90° or above	Min. 32° or below					Total	Max Depth on Ground	Date	01 or more	.25 or more	1.00 or more
EASTERN DIVISION																		
ARVILLA STATE PARK	27.7		52	3	- 4	28	27	.79		.32	25				6	2		
BALDILL DAM	29.3M																	
CAVALIER POWER PLANT	27.8	3.1	55	1	- 6	28	25	1.42	.88	.56	4	6.7	8	25+	10	2		
COOPERSTOWN	28.5	1.2	49	1	- 4	28	26	.72	.08	.22	25	8.4	2	10	6			
DEVILS LAKE WB CITY	27.1	2.6	49	3	- 2	28	26	1.04	.32	.25	24	8.3	5	25+	12	1		
EDGELEY EXP FARM	30.7	1.4	53	1	1	13	26	.68	.16	.20	11	3.0	2	11	10			
EDMORE 1 W	28.9	2.3	47	1+	- 7	30	27	.93	.31	.23	25	5.9	4	25+	11			
ELLENDALE NORMAL SCH	30.4	2.0	57	1	5	13	26	.83	.27	.53	12	8.5	7	12+	5	1		
FARGO WB AIRPORT	29.0	1.9	54	3	1	28	28	.76	-.14	.31	12	9.8	7	13	9	1		
FULLERTON	31.5	2.5	56	1	5	13	28	.76	.05	.42	12	8.6	4	12+	7	1		
GACKLE	30.0	2.6	60	1	5	13	27	.25	-.29	.07	13	3.2			8			
GRAPTON STATE SCHOOL	28.3	3.3	55	1	-10	28	25	1.11	.42	.45	25	T	4	25	8	1		
GRAND FORKS CAA	28.4	2.6	51	3+	- 8	28	26	.72	-.07	.28	4	8.2	6	23	8	1		
GRAND FORKS UNIVERSITY	28.2	2.4	52	3	- 4	28	26	.93	.14	.37	4	6.4	5	25+	9	2		
HANKINSON RR STATION	32.1	3.2	66	1	9	23+	25	.46	-.19	.14	14	1.5			8			
HANNAH	25.8	5.1	45	15	2	27	28	1.70	1.01	.71	25	9.5			8	2		
HILLSBORO	29.0	1.7	53	1	- 3	28	25	.65	-.11	.19	25	5.0		13	8			
JAMESTOWN CAA	29.8	2.5	52	1	3	28	27	.63	-.04	.24	4	2.6	2	10+	9			
JAMESTOWN STATE HOSP	30.2	2.9	50	4	6	28	26	.71	.04	.20	10	3.0	2	10	7			
KENSAL WILDLIFE REFUGE	28.2M							.68		.17	25	4.5			7			
LA MOURE	31.0		52	1	8	13+	28	1.20		.84	4	T			7	1		
LANGDON EXP FARM	25.0	1.3	48	3	-14	28	27	1.19	.46	.30	1	4.6	4	25+	11	2		
LARIMORE	28.2	2.4	48	1+	- 4	28	25	1.15	.33	.45	25	6.0			8	3		
LISBON	29.9	1.1	55	3	0	13	27	.75	.12	.28	4	4.2	2	12+	9	1		
MAYVILLE	29.7	1.9	55	1	0	28	25	.89	.18	.32	4	5.3	4	25+	11	2		
MC HENRY 6 N	26.3	-0.3	48	4	- 8	28	26	.91	.37	.38	4	2.8	2	25+	9	1		
MC LEOD 3 E	31.2	1.5	65	2	4	28	27	.87	.24	.28	12				8	1		
MILNOR	29.4M		80	1+				.70		.35	4+				2	2		
MUNICH 4 SW	25.6		48	3	-12	28	26	.79	.25	.25	1	6.5	1	10	9	1		
OAKES WATER WORKS	31.3	2.7	68	1	4	13	28	1.33	-.77	.73	5	T			7	1		
PARK RIVER	29.0	2.0	50	4	4	30	25	.99	.36	.33	25	7.2	7	25	8	2		
PEMBINA CAA	27.0	3.6	50	4	- 6	28	25	1.57	.82	.40	4	3.9	3	29+	12	1		
PETERSBURG	26.6M				- 6	28		1.06	.42	.52	25	7.5			8	2		
SHARON	28.2	3.5	50	1	- 6	28	27	.94	.22	.30	4	7.0	5	25+	9	1		
VALLEY CITY	30.4	2.4	57	5	1	28	26	.88	.20	.25	4	6.9	2	10	9	1		
WAHPETON STATE SCHOOL	31.9	2.9	58	1+	9	28	26	.57	-.12	.13	14	4.1	2	14	10			
DIVISION	28.9	2.4						.90	.18									
MIDDLE DIVISION																		
ASHLEY	30.0M	2.0						.49	-.08	.15	5				8			
BELCOURT INDIAN RES	23.3		54	15	-19	28	28	1.52	.42	.24	24	12.2	11	25	9	2		
BISBEE	24.2	-2.2	47	4	-13	28	27	1.85	1.18	.54	25	13.0	9	25	8	3		
BISMARCK WB CITY	32.4	3.9	64	1	11	20+	24	.67	.19	.22	18				7			
BISMARCK WB AIRPORT	31.5	5.0	55	1	11	20	28	.70	.13	.20	15	1.0	T	10	9			
BOTTINEAU	24.9	1.3	45	15	-14	28	28	.71	.24	.19	2				9			
BOTTINEAU STATE PARK	26.1		60	1	0	22	28	1.93		.50	24	15.0			9	2		
CARSON 2 SW	30.7	0.9	55	1	6	20	29	1.03	.46	.21	5	5.4	4	12	7			
CENTER	30.4	1.9	59	1	6	20+	27	.74	.23	.22	4	1.0	T	10+	7			
DRAKE	28.4	2.5	56	1	1	27+	24	1.31	.77	.33	25	2.0	2	11	10	1		
DUNSMITH ST SANITARIUM	25.2	1.1	48	1	-12	28	27	1.28	.78	.50	25	9.6	8	25	7	7		
ECKMAN	25.5	0.1	58	1	-14	28	27	1.67	1.18	.43	25	7.8	5	28+	10	1		
FESSENDEN	28.8	2.0	49	3	0	29	26	1.06	.46	.21	9+	4.0	4	10+	8			
FORT YATES	33.7	3.7	65	1	10	13	25	.73	.28	.35	18				4	1		
FOXHOLM WILDLIFE REF	29.3	3.7	52	1	- 7	28	26	1.37	.69	.31	1	5.0	4	25+	10	1		
GARRISON	29.9	3.4	47	17	8	20+	24	1.20	.71	.34	1	1.0	1	10	9	2		
GRANVILLE	27.9	1.5	50	3+	- 5	28+	27	1.60	1.06	.35	1	4.5	3	25+	10	2		
HANSBORO	25.0M	1.5						1.22E	.68	.49	3	7.5	6	25+	8	2		
LEEDS	27.0		50	3	2	26+	25	1.59	.42	.42	4	8.8			13	2		
LINTON	32.5	3.7	58	1	9	28	25	.76	.31	.13	5+	1.3	T	10+	8			
MADDOCK AGR SCHOOL	27.1	0.9	50	3	-10	28	26	1.31	.80	.25	4	8.6			9	1		
MANDAN EXP STATION	31.6	2.7	61	1	11	20+	25	.53	.01	.16	5	.5			7			
MANDAN FT LINCOLN PARK	32.8		57	1	11	20	24	.76		.41	5	1.1			8	1		
MAX	28.8	3.1	54	1	4	28	27	1.44E	.94	.30	2	3.5	2	11	11	2		
MC CLUSKY	29.1M	3.5						1.00	.45	.24	15	2.0			6			
MINOT CAA	28.4	1.0	48	15	0	28	25	1.45	.79	.39	1	5.8	3	25+	10	2		
MINOT EXP FARM	28.8		48	1+		28	26	1.63		.41	1	5.4	4	25+	11	1		
MOHALL	28.4	1.4	47	15	- 9	28	27	2.04	1.50	.53	24	9.7	7	25	10	3		
NAPOLEON 2 SF	28.8M	2.0			2	13	27	.71	.13	.15	12	2.3	2	12	11			
NEW SALEM 1 S	32.2	2.8	63	1	7	20	27	.42	-.06	.08	13	2.5	T	15	10			
PETTIBONE	29.5	3.4	53	1	5	28	25	.66	.13	.16	10+	2.2	1	13+	9			
RIVERDALE	31.7		58	2	5	20	26	1.15		.25	10	1.0	1	10	8	1		
ROLLA	25.1	1.9	44	15	- 9	28	26	1.29		.29	2	7.5			10	1		
RUGBY 1 N	25.8		48	3	- 8	26+	26	1.25	.73	.40	25	9.5			11	1		
STEELE	29.8	3.3	53	1	5	28	26	.26	-.21	.09	10	0.5			5			
TOWNER	28.3	0.9	58	2	-10	28	28	1.17	.64	.21	1	8.0			10			
TURTLE LAKE	29.7	1.6	49	3	5	20	24	.76	.34	.11	10	4.0			11			
UNDERWOOD 12 W	31.4	3.1	55	1	5	20	25	.83	.38	.40	4	T			6	1		
UPHAM WILDLIFE REFUGE	26.6		50	15	-12	26+	27	1.55	.35	.35	24	8.0			9	2		
VELVA	28.9	1.5	50	15	- 3	28	26	2.11	1.47	.58	1	8.5	6	26+	11	2		
WASHEBURN	32.3	2.9	49	15+	10	20	24	.48	.04	.15	10	1.8	1	10	7			
WESTHOPE	28.2	1.1	49	15	-10	28	27	2.13	1.58	.56	2+	12.0	8	25	10	3		
WILLOW CITY	25.9	3.2	48	15	-16	28	26	1.35	.79	.36	24	7.0	6	25	9	2		
WILTON RR STATION	28.6	1.3	51	1	6	13+	26	.65	.17	.12	10+	1.3	T	10+	10			
WISHEK	29.7	1.3	53	2	6	28	28	.51	.06	.15	12	3.2	3					

See reference notes following Station Index.

CLIMATOLOGICAL DATA

NORTH DAKOTA

NOVEMBER 1948

Table 2-Continued

Station	Temperature								Precipitation									
	Average	Departure from Normal	Highest	Date	Lowest	Date	No. of Days		Total	Departure from Normal	Greatest Day	Date	Snow, Sleet, Hail			No. of Days		
							Max. 90° or above	Min. 32° or below					Total	Max. Depth on Ground	Date	.01 or more	.25 or more	1.00 or more
WESTERN DIVISION																		
ALMONT 7 SW	31.7		54	1	8	20	27	27	1.05		.35	5	1.0	2	12	11	2	
AMIDON	30.5	-0.1	58	30	5	13	28	28	1.17	.76	.58	4		3	12	9	2	
BELFIELD	30.6M	1.2	55	1+	4	13			1.52	1.04	.56	4		4	12	9	2	
BOWBELLS RR STATION	27.4	1.2	54	1	-11	28	28	28	2.19	1.73	.91	25	3.4	1	11	9	3	
BOWMAN COURT HOUSE	30.8	0.3	50	3+	11	20	27	27	.95	.57	.46	4	4.1			7	1	
CROSBY	28.3	1.8	56	1	0	28	28	28	1.57	1.01	.35	25	7.0			9	2	
DICKINSON CAA	29.9	1.7	58	3	4	12	28	28	.84	.36	.55	4	2.1	2	12	10	1	
DICKINSON EXP STATION	30.3	2.1	61	1	3	12+	28	28	1.14	.66	.51	5	3.6	2	12+	14	1	
DUNN CENTER	32.4M	4.5	65	1					.63	.19	.36	5				2	2	
ELBOWOODS	33.6M	5.2									.							
EPPING	29.7	3.4	47	3	7	28	27	27	1.01	.58	.27	4	4.0	3	10	8	1	
GRENORA	30.8	4.7	57	1	11	20	26	26	1.15	.60	.40	2	3.0			7	3	
HETTINGER	31.4M	0.0	64	1					1.08	.68	.83	4				5	1	
KENMARE	29.4	3.1	59	1	2	28	26	26	1.70	1.16	.38	5	6.0	4	25	10	3	
MARMARTH	30.6	-0.3	65	1	7	20+	27	27	1.60	1.23	.80	4	6.3	2	11	6	3	
MEDORA STATE PARK	31.9M	1.8	56	1					1.75	1.27	.75	4	T			4	4	
MEDORA T R N M P	32.3		52	1	3	20	25	25	1.09	.48	.48	4	T	1	10+	12	1	
MOTT RR STATION	31.8	2.5	58	1	5	20	29	29	.81	.35	.50	4	2.0			7	1	
NEW ENGLAND	32.4	3.0	56	4	5	20	28	28	.70	.25	.34	4	1.5			4	1	
PARSHALL	29.2	3.7	50	1+	3	20	29	29	1.40	1.01	.49	1	2.0	1	10+	10	2	
PORTAL	27.7	2.7	54	1	- 3	28	28	28	2.22	1.70	.60	3	4.0	3	25	11	4	
POWERS LAKE	28.4	3.0	55	1	- 4	28	28	28	1.80	1.31	.53	2	4.4	3	24+	8	4	
RICHARDTON ABBEY	31.3	2.6	54	1+	6	20	28	28	1.40	.88	.72	5	3.2	2	10	7	2	
SANISH	29.9	1.9	56	1	6	20+	27	27	1.76	1.23	.53	5	T			9	3	
VAN HOOK	30.7M				5	20	25	25	1.42		.53	1	1.0	1	10	8	2	
WATFORD CITY	31.5	3.0	49	3	7	20	24	24	1.56	1.07	.53	1	0.5			10	2	
WILLISTON WB CITY	31.3	4.1	48	3	11	20	24	24	.92	-.34	.29	4	0.1	T	8	11	1	
DIVISION	30.6	2.4							1.32	.79								
STATE	29.4	2.8							1.11	.49								

See reference notes following Station Index.

NORTH DAKOTA
NOVEMBER 1948

Station		Day of Month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ADAMS 7 S			.40	.26	.10	.18									.02																	1.75	
ALEXANDER RR STATION			.23	.06	.05	.13	.44			.08	.08	.08	.01	.06											.03	.14	.38	.29				1.36	
ALMONT 7 SW			.02	.01		.30	.35			.01	.07	.03	.07			T	.09							.05	.05	.15						1.05	
ALPHA 1 S					.73	.14						T											T	.05	T							1.07	
AMIDON					.58	.30			.03	.02	.09	T	.03	.02			.02			T	.03		T	.08	T					T		1.17	
ARVILLA STATE PARK					.28	.04							.02											.07	.08	.32						0.79	
ASHLEY		Z	.13		.05	.01	.15				.01		.13	.02		.08	.04						T	.04								0.49	
BALDWIN DAM			.13	.21	.25	.05	.10		T		T	*	.10	.04	.04		.04						.02	.10			.75		.02				
BELCOURT INDIAN RES			.22	.22	.15	.02	.01			T	.13			.08										T	.42	.29							
BELFIELD			.05			.58	.38			.11		.03	.21	.09						T			T	.05	.04	T				T		1.52	
BEULAH			.05			.21	.32			.01	.04			.08									.03	.01	.05							0.88	
BISBEE			.31	T		.35	T			.07	.09			.06										.07	.13	.54						1.85	
BISMARCK WB CITY					.03		.14			T	.10													.10		.04						0.87	
BISMARCK WB AIRPORT		Z	T	.04		.18	.03		T	T	.09	T		.05	.04	.20	.22			T	T		T	.08	.01	.04				T		1.93	
BOTTINEAU STATE PARK			.15	.40	.20	.14				T		.15	.10	.09										.20	.50								
BOWBELLS RR STATION				.09	.50	.06	.28		T		.09	.08	T	T	.16										.08	.91						2.11	
BOWMAN COURT HOUSE		Z				.48	.09		.03		.08	T	T	.20			.05			T				.04								0.95	
CARSON 2 SW			T			.19	.21			.04	.20	T	T	.20			.15								.04	.04						1.03	
CAVALIER POWER PLANT			.13	.11	.04	.56	.08					T		.02										.07	.08	.33	.02		T			1.42	
CENTER			T	T		.22	.15			T	.08	T	T	.11	.05								.02	.07	.11	T	T					0.74	
COGSWELL				T		T	.10	T		T	T	T												T			T					0.10	
COLGATE					.23	.02					.12																.27					0.84	
COOPERSTOWN					.10	.07				</																							

See reference notes following Station Index

DAILY PRECIPITATION

NORTH DAKOTA
NOVEMBER 1948

Table 3-Continued

Station	Day of Month																																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
RYDER	T	.58	.05		.15	.14			T	T	.12			.08									.08	.15			T	T			1.35			
SANISH		.22	.30	.08		.53	.03			.15				.15									.03	.27							1.76			
SARLES 3 E	R//	.20	.27	.01	.15	.03			.04				.10									.08	.01	.56	.22		*	.08			1.73			
SEARON		.03	.1	.02	.30	.05				.11			.06										.05	.12	.20						0.94			
SHERWOOD		.02	.40	.10	.08	.14			T	.20	T	T	.12					T					T	.35	.15		.05	T			1.81			
STEELE	T			T	.04				T	.09			T			.03							.03	.07	.07	T					0.28			
TAGUS	.38	.04	.02	.13	.10				T	.10	T	T	.12	.05				T				T	.06	.37	.03	T	T				1.40			
TIOGA	T	.60			.50					.10			.30									T	.15	T							1.65			
TOWNER	.21	.15	.19	.13		.10				.04		.07	T				T						.10	.10	.10	.08					1.17			
TROTTERS	.13	.02		.76				.03	.28	T	.12	T	T					.02				T	.11	.08	T						1.55			
TURTLE LAKE	.07	.07		.06	.05				T	.11		.10	.05	.04				T					.05	.09	.07						0.76			
TUTTLE 8 SW			.04	.03	.05					.02	.10		.08	.02		.09							.03	.05	.04	.08					0.63			
UNDERWOOD 12 W	.07			.40	.10			T	T	T	.04	.07		.15								T		.35	.27						0.83			
UPHAM WILDLIFE REFUGE	.20	.12		.10	.18					.17	T	T	.13					T					.03	.35	.27						1.55			
VALLEY CITY			T	.25	.02				T	.17	.04	.05	T	.11							T		.06	.14	.04		T				0.88			
VAN BOOK	.53			.20	.34					.10		.10	T									T	.01	.13	.01						1.42			
VELVA	.58	.03	.02	.19	.17				T	.24		T	.20	.02				T					.08	.23	.37		T				2.11			
VERONA				.80					T																						0.80			
WASPETON POWER PLANT R		.05		T	.05	T				.10		.08	.03	.19		.08			.07	.08			.04	.08	.03						0.73			
WASPETON STATE SCHOOL			.01	T								.05	.03	.13		.04				.09			.01	T	.06						0.57			
WALHALLA		.04	.44	.40	.09								.11						.03	.48				.10	.03						1.59			
WASEBURN		.02		.03	T				T	.15		T	.10		T	T							.05	.10	.03						0.48			
WATFORD CITY	.53	.11	.10	.31	.11					.17			.09										.06	.06	.04						1.56			
WESTHOPE	.14	.56	.05	.31	.04					.18			.12					T	.06					.46	.21						2.13			
WILDROSE	T	.39		.19	.36			T		.17			.15	.03				T			T	T	.06	.25	.12		T				1.72			
WILLISTON WB CITY	R	.19	.05	.11	.29	.01		T	.03	.03	.01	T	.11					T	T	T	T	T		.07	.02	T	T				0.92			
WILLOW CITY		.29	.17		.04	.10			.03	.07		T	.11					T					T	.36	.18						1.35			
WILTON RR STATION		T	.01	T	.04	.05				.12	.04			.09		.09							T	.12	.05	.04					0.65			
WISHEK		T	.01	T	.09				T	.02	.05	.15		.06		.04							T	.07	.01	.01						0.51		

TABLE 6

DAILY EVAPORATION (INCHES) AND WIND MOVEMENT (MILES)

STATION		DAY OF MONTH																															TOTAL	DEPART- URE FROM NORMAL
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
DICKINSON EXP STATION	EVAP WIND	45	70	75	82	180	157	136	98	174	258	50	80	50	140	40	90	65	95	100	25	30	95	145	70	160	55	80	110	90	135		2980	

TABLE 7

DAILY RIVER STAGES (FEET)

RIVER AND STATION	FLOOD STAGE	DAY OF MONTH																															HIGHEST (OR CREST)	DATE	LOWEST	DATE
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
MISSOURI																																				
WILLISTON L C BRIDGE	20	5.7	5.8	5.7	5.8	5.6	5.4	5.2	5.0	5.0	4.7	4.6	4.4	4.2	4.1	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.9	4.1		5.80	2	3.9	28
SISMARCK WATER WORKS	19	8.0	7.9	7.8	7.9	8.0	8.1	7.9	7.7	7.5	7.4	7.0	6.8	6.6	6.9	6.3	6.2	6.1	6.0	6.0	6.1	6.2	6.2	6.3	6.4	6.4	6.4	6.3	6.3	6.2		8.06	6	6.0	15	
WASHBURN POWER PLANT		7.2	7.2	7.3	7.4	7.4	7.4	7.3	7.2	7.0	6.9	6.7	6.4	6.3	6.2	6.0	5.8	5.6	5.6	5.6	5.6	5.6	5.8	5.8	5.8	5.8	5.7	5.6	6.0	6.1	5.8	7.42	6	5.6	15	

Readings are made at approximately 7 A. M. (local time). They are provisional and subject to correction. Final and corrected stages will be published in the annual publication "Daily River Stages - Principal Rivers of the United States." The following reference notes apply only to Table 7, Daily River Stages:

- a Obstructed by rough ice.
- b Frozen but open at gage.
- c Upper surface of smooth ice.
- d Ice gorge above gage.
- e Ice gorge below gage.
- f Shore ice.
- g Floating ice.
- h Pool stage.
- i Dry at gage.
- j Interpolated.

Table 4

- 100 -

NORTH DAKOTA
NOVEMBER 1948

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NORTH DAKOTA
NOVEMBER 1948

Table 4-Continued

See reference notes following Station Index.

HOURLY PRECIPITATION

NORTH DAKOTA

NOVEMBER 1948

Table 4--Continued

Station	A. M. Hour ending												P. M. Hour ending												Total
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
	-29th-																								
GRANO PEMBINA CAA SARLES 3 E	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	.04 .01 .06
MC GREGOR RR STATION	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///	///

DAILY TEMPERATURES

Table 5

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ALMONT 7 SW	MAX	54	41	47	41	43	44	40	37	31	34	37	32	42	44	51	32	46	46	37	28	36	28	42	40	43	37	37	31	42	40	38	39.6
	MIN	37	32	28	37	32	31	23	19	25	21	20	18	10	27	33	32	29	25	16	8	19	18	29	29	26	20	22	15	21	14	23.9	
AMIDON	MAX	49	40	50	47	41	43	37	34	32	33	34	30	42	48	47	43	42	34	27	41	33	40	42	43	38	40	33	47	41	58	40.3	
	MIN	35	28	23	30	29	25	16	37	13	15	20	17	13	5	21	35	26	29	23	18	15	20	12	27	29	26	15	15	15	21	9	20.8
ARVILLA STATE PARK	MAX	50	45	52	50	48	45	43	42	41	33	38	32	29	42	44	42	38	29	26	22	22	33	36	34	32	23	19	25	34	26	35.8	
	MIN	32	28	39	45	40	30	27	17	16	15	22	20	10	22	20	30	14	15	9	8	9	5	22	30	21	17	12	-04	15	4	19.7	
ASHLEY	MAX	62	55	28	48	51	38	45	40	43	29	35	39	24	38	46	51	45	49	27	30		32	39	39	34	31	30		37	43	40.0	
	MIN	28	28	32	35	37	28	23	13	14	11	16	20	5	17	24	27	23	22	12		12	21	24	26	19	12		9	11	20.0		
BALDHILL DAM	MAX	66	54	47	51	50	41		46	43	41		37	28		41	39	41	40	34			30	33	34		33	21		32	40	40.1	
	MIN	29	27	31	38	40	28		12	15	13		10	8		10	30	24	20	11			8	33	27		13	3		0	8	18.6	
BELCOURT INDIAN RES	MAX	42	38	42	40	37	41	37	35	31	27	30	24	31	39	54	41	28	23	24	25	24	31	33	34	29	16	20	29	30	20	31.8	
	MIN	30	32	35	36	32	28	16	14	15	15	20	10	8	23	26	26	16	15	11	7	1	11	26	22	13	-04	-05	-19	-11	-03	14.9	
BELFIELD	MAX	55	40	55	46	45	44	39	36	34	34	38	32	42	49	47	45	42	34	28	39	29	42	43	45	35	41	32	44	40	41	40.5	
	MIN	38	33		36	33	28	16	16	17	22	20	8	4	21	30	27	24	23	15	4	20	12	28	30	27	15	14	11	19	12	20.8	
BISBEE	MAX	39	39	45	47	44	44	45	41	38	36	30	29	32	29	42	38	37	35	27	29	28	31	31	32	31	20	20	10	21	20	33.0	
	MIN	29	34	38	38	32	26	13	18	17	13	17	13	9	17	24	19	20	21	10	3	4	10	21	15	13	2	3	-13	3	-04	15.5	
BISMARCK WB CITY	MAX	64	56	43	48	48	43	46	42	40	36	36	43	26	42	45	45	48	50	30	32	34	35	42	40	40	30	34	34	42	43	41.2	
	MIN	36	35	34	35	35	32	24	18	25	19	22	21	16	22	30	34	25	25	15	11	14	14	25	29	24	21	19	12	24	11	23.6	
BISMARCK WB AIRPORT	MAX	55	43	48	48	44	47	42	40	33	36	40	28	42	46	47	47	48	30	30	34	30	42	40	39	36	31	34	41	43	38	40.1	
	MIN	35	35	35	40	32	29	20	16	18	21	24	16	12	15	28	28	31	24	15	11	15	24	26	29	22	20	15	12	16	15	23.0	
BOTTINEAU STATE PARK	MAX	60	50	41	39	39	35	37	39	35	39	29	28	29	37	40	35	32	33	31	28	25	29	31	30	31	30	20	26	30	29	33.9	
	MIN	40	39	31	31	25	20	20	21	19	15	19	19	18	21	30	25	20	19	10	9	5	0	21	15	5	11	10	9	19	5	18.4	
BOWBELLS RR STATION	MAX	54	42	38	44	39	45	41	38	38	35	31	34	25	40	45	41	34	26	30	30	31	27	39	38	39	32	31	24	38	31	36.3	
	MIN	30	34	32	33	32	28	22	21	21	25	20	18	12	22	24	30	22	21	9	15	11	8	20	22	11	12	2	-11	2	10	18.6	
BOWMAN COURT HOUSE	MAX	45	45	50	50	35	42	35	34	37	34	32	31	42	42	42	38	36	36	31	29	26	39	38	37	38	36	35	39	39	36	37.6	
	MIN	41	33	23	32	31	31	18	14	18	22	17	16	12	24	36	32	25	28	25	11	15	26	29	28	22	24	23	22	19	24	24.0	
CARSON 2 S W	MAX	55	48	50	48	44	46	40	37	33	35	38	30	40	46	50	45	49	34	32	38	30	42	41	45	35	40	40	42	40	40	40.8	
	MIN	39	30	26	30	31	27	17	15	17	17	16	16	9	11	32	29	24	24	16	6	14	13	30	25	27	20	18	11	20	10	20.7	
CAVALIER POWER PLANT	MAX	55	43	47	52	48	44	41	40	38	33	38	33	30	40	45	42	33	29	28	30	31	34	36	35	34	26	24	21	30	23	36.1	
	MIN	34	36	38	39	35	28	26	20	16	19	22	18	15	24	26	31	19	13	3	6	11	13	22	28	20	14	4	-06	12	2	19.6	
CENTER	MAX	59	49	48	42	52	46	40	37	32	31	40	30	41	45	49	45	46	35	26	33	30	42	31	40	35	24	32	42	33	37	39.1	
	MIN	33	32	33	36	32	27	21	18	25	18	20	16	10	24	27	31	21	25	16	6	11	8	29	27	22	21	20	6	22	16	21.7	
COOPERSTOWN	MAX	49	43	46	48	47	43	41	39	40	30	35	30	26	39	38	40	37	30	29	27	31	33	33	33	31	24	28	31	35	31	35.6	
	MIN	35	30	40	44	37	28	24	15	24	17	15	17	9	25	28	32	26	20	11	11	9	21	25	28	22	14	17	-04	17	4	21.4	
CROSBY	MAX	56	49	39	45	40	49	43	40	37	34	31	34	32	39	40	44	43	37	28	26	33	26	36	39	33	25	26	22	35	29	36.3	
	MIN	29	31	34	35	32	28	21	16	16	18	18	17	13	21	22	28	26	24	24	8	10	12	21	29	21	19	15	0	10	10	20.3	
DEVILS LAKE WB CITY	MAX	40	41	49	47	42	43	38	38	34	31	34	26	35	38	43	37	36	25	29	28	31	33	34	33	29	17	23	32	33	31	34.3	
	MIN	35	36	40	42	32	28	23	18	22	18	18	18	10	25	29	27	20	16	11	7	6	18	25	29	17	10	7	-02	7	3	19.9	
DICKINSON CAA	MAX	48	38	58	45	44	43	38	34	31	33	34	26	40	48	46	44	42	31	28	38	29	40	42	44	32	38	29	44	37	39	38.8	
	MIN	32	31	26	32	30	28	19	19	20	20	17	4	15	25	32	29	26	24	9	6	22	15	28	41	36	18	13	12	13	12	21.8	
DICKINSON EXP STATION	MAX	61	48	40	54	39	45	44	39	36	35	33	35	34	43	51	46	45	45	29	28	38	27	41	43	44	30	41	30	46	38	40.3	
	MIN	38	31	26	33	32	29	18	15	16	22	14	12	3	23	24	28	23	26	22	3	5	11	17	27	28	19	18	18	20	9	20.3	
DRAKE	MAX	56	42	41	51	42	39	44	39	38	32	33	34	23	37	43	49	43	39	27	27	35	28	38	37	33	28	19	29	35	33	36.5	
	MIN	33	36	36	37	36	27	21	19	18	19	14	17	10	19	29	29	29	25	16	6	5	20	22	30	28	2	1	1	18	7	20.3	
DUNN CENTER	MAX	65	47	41	52	42	47	47	43	38	35	38	34	43	48	50	50	51	45	32	41	30	48	43	43	45	39	41			45	43.7	
	MIN	36	31	28	28	31	28	12	11	22	17	22	13	6	22	30	29	28	26	19	2	9	26	29	22	18	28	12			5	21.1	
DUNSEITH ST SANITARIUM	MAX	48	38	41	41	38	42	40	35	33	28	30	26	30	38	46	43	35	26	27	33	30	31	35	33	32	18	19	25	30	22	33.1	
	MIN	31	32	35	36	33	26	17	14	21	15	21																					

DAILY TEMPERATURES

NORTH DAKOTA
NOVEMBER 1948

Table 5-Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
FESSENDEN	MAX MIN	48 32	42 35	49 39	47 40	46 35	47 28	45 18	39 20	32 22	33 16	41 15	35 18	35 10	40 18	45 25	45 29	40 28	32 21	27 12	28 8	32 10	36 14	37 29	35 29	33 14	19 5	28 7	36 15	31 9	34 9	37.2 20.0	
FORMAN	MAX MIN	57 32	50 30	59 39	53 48	52 40	47 30																					35 12	33 8	47 25	35 12		
FORT YATES	MAX MIN	65 31	55 46	46 29	50 42	45 37	46 30	44 24	42 12	44 24	40 17	40 20	35 24	43 10	47 29	53 28	50 33	47 23	40 25	35 16	36 11	30 15	40 24	43 33	37 24	37 30	37 24	36 21	38 11	45 30	40 14	42.9 24.6	
FOXHOLM WILDLIFE REF	MAX MIN	52 33	40 35	48 32	45 38	44 34	43 28	40 21	41 21	39 21	34 23	34 21	33 17	40 10	45 25	49 40	45 29	36 22	27 16	31 17	28 10	39 20	39 31	36 28	34 19	20 12	27 9	37 -07	39 16	31 4	37.8 20.8		
FULLERTON	MAX MIN	56 31	46 28	51 31	51 41	50 39	48 32	48 26	45 16	37 23	38 14	40 20	33 23	29 5	43 27	42 24	45 32	45 24	36 24	28 14	30 15	31 8	31 21	34 25	35 29	34 31	32 23	35 19	36 8	45 25	36 22	39.7 23.3	
GACKLE	MAX MIN	60 32	45 27	43 35	50 39	49 34	44 30	43 27	41 15	30 23	34 6	38 15	34 19	30 5	44 25	43 24	42 25	47 25	33 28	29 12	29 13	30 15	34 23	35 34	35 29	34 25	34 19	32 15	36 10	40 22	35 13	38.4 21.6	
GARRISON	MAX MIN	41 36	40 35	46 35	42 38	43 30	44 30	39 21	38 15	34 27	33 19	32 22	24 15	40 14	42 27	43 30	44 30	47 25	29 24	30 13	35 8	28 14	40 22	39 29	39 29	35 16	25 16	36 13	40 8	37 17	36 13	37.4 22.4	
GRAFTON STATE SCHOOL	MAX MIN	55 34	43 32	48 40	50 42	48 39	44 30	44 30	41 27	41 19	39 19	38 21	34 24	30 16	34 24	43 26	45 35	36 17	29 19	28 8	27 10	19 12	30 12	35 23	35 29	32 24	24 16	23 8	23 -10	33 12	25 3	35.9 20.8	
GRAND FORKS CAA	MAX MIN	47 32	48 30	51 43	51 46	48 36	44 29	44 25	41 18	39 24	34 21	37 22	32 26	30 20	40 28	42 28	42 24	36 19	30 16	30 11	19 10	18 16	30 25	34 30	33 20	30 20	21 17	23 9	28 -06	34 15	22 2	35.3 21.6	
GRAND FORKS UNIVERSITY	MAX MIN	48 34	48 30	52 43	50 46	46 36	43 30	44 25	42 30	39 28	33 24	37 21	31 26	29 19	40 28	41 28	41 24	36 30	30 21	20 16	19 10	29 15	29 33	33 29	21 21	21 17	23 9	28 -04	35 15	22 3	34.8 21.7		
GRANVILLE	MAX MIN	46 31	41 36	50 33	43 38	41 29	44 26	38 21	41 18	34 23	33 19	33 17	25 12	36 11	46 23	50 25	43 28	39 25	30 23	29 14	31 4	29 9	38 20	38 30	35 28	35 16	19 -05	25 3	36 5	35 11	31 4	36.5 19.3	
GRENORA	MAX MIN	57 32	50 32	45 33	43 35	46 30	43 28	40 27	35 19	35 16	33 15	35 16	34 15	40 15	41 22	42 23	43 27	45 28	38 35	32 14	34 20	37 18	40 24	34 30	38 28	34 18	38 16	34 18	36 30	33 24	34 13	38.9 22.8	
HANKINSON RR STATION	MAX MIN	66 35	58 34	53 31	58 47	52 46	48 31	47 28	42 20	45 20	39 22	35 18	38 22	35 18	40 18	44 29	48 36	44 27	49 27	30 18	28 18	24 11	26 12	29 9	35 24	34 29	37 23	28 12	33 11	37 13	47 9	41.0 23.3	
HANNAH	MAX MIN	41 29	43 32	42 31	42 36	41 36	42 36	37 20	37 20	37 17	33 17	31 21	29 32	32 15	35 18	45 21	37 28	31 29	26 26	28 12	26 5	26 7	30 11	34 21	32 27	30 18	18 8	16 2	27 16	28 14	26 5	32.7 19.0	
HANSBORO	MAX MIN	43 30	41 34	45 33	42 36	38 31	41 27		38 17	33 19	30 15	31 16	27 15	38 7	38 21	49 25	38 23	32 25	25 17	27 17	28 13	29 5	31 6		35 22	30 13	18 -02		29 -15	30 11	22 -02	33.6 16.4	
HETTINGER	MAX MIN	64 29	46 29	49 23	47 33	43 30	44 30	41 21	41 14	32 22	36 19	37 20	33 12	44 15	51 21	44 28	47 29	39 26	29 20	39 5	30 20	41 12	44 31	40 28	33 28	40 18	32 16	39 12	42 19	40 8	41.3 21.6		
HILLSBORO	MAX MIN	53 32	48 32	52 43	52 48	48 40	46 33	38 25	44 18	39 22	31 19	38 17	32 25	29 19	41 28	38 25	41 34	39 23	29 22	30 13	27 14	18 11	25 11	34 20	33 29	32 17	24 11	23 -03	27 12	39 12	25 5	35.8 22.3	
JAMESTOWN CAA	MAX MIN	52 32	44 29	48 36	50 46	46 36	46 33	42 29	41 22	39 17	34 18	37 18	27 19	38 9	45 28	42 27	43 29	46 24	27 18	30 12	31 10	35 6	32 24	34 34	34 30	27 30	35 12	36 9	41 3	36 15	38 11	38.5 21.2	
JAMESTOWN STATE HOSP	MAX MIN	48 33	44 31	46 36	50 42	48 37	45 29	43 24	40 16	35 21	35 18	39 21	29 18	30 11	44 29	44 28	43 32	45 26	31 23	28 12	28 14	37 7	32 25	34 28	35 29	34 25	25 9	33 10	37 6	41 21	37 13	38.0 22.5	
KENMARE	MAX MIN	59 34	41 33	39 39	45 39	39 32	48 29	44 23	41 23	39 23	38 25	32 21	40 18	26 16	40 23	43 28	47 31	46 22	36 21	27 20	27 8	35 19	27 20	38 34	41 30	26 34	27 14	27 12	26 3	39 15	31 6	37.4 21.5	
KENSAL WILDLIFE REFUGE	MAX MIN	40 32	41 31	44 37	48 42	48 30	38 28	37 21	40 12	29 16	30 15	39 12	26 13	28 8	42 25	41 25	41 30	40 23	29 17	27 9								32 8	37 -03	32 14	35 4	36.7 19.7	
LA MOURE	MAX MIN	52 29	45 28	50 31	51 44	50 37	47 44	43 30	46 25	40 9	37 16	42 18	35 23	31 8	44 27	41 24	45 32	50 24	32 14	30 15	29 10	32 23	32 23	35 36	34 28	32 28	36 15	38 11	45 8	37 20	32 12	39.9 22.1	
LANGDON EXP FARM	MAX MIN	45 28	39 32	48 37	44 36	42 35	42 26	39 21	37 16	38 19	33 12	32 19	29 16	27 10	38 23	46 25	40 30	33 13	27 16	30 4	28 6	30 10	30 20	33 25	31 18	28 12	19 3	19 -14	25 12	30 12	18 -06	33.3 16.8	
LARIMORE	MAX MIN	48 37	43 30	48 41	48 44	47 38	45 31	42 26	42 19	38 21	31 20	38 21	32 24	28 13	41 26	41 27	35 29	27 18	25 10	20 8	23 12	32 12	35 25	35 31	30 20	21 16	23 12	24 -04	35 15	25 6	34.8 21.6		
LEEDS	MAX MIN	44 33	42 36	50 39	43 38	42 36	43 27	38 22	39 19	31 22	29 12	34 10	27 12	30 7	39 27	44 28	42 24	36 25	29 20	29 13	29 7	30 15	33 27	35 31	33 28	31 18	23 9	32 6	32 14	32 2	34.6 19.5		
LINTON	MAX MIN	58 38	48 33	48 31	50 44	49 36	46 29	42 20	43 11	32 23	37 16	43 28	33 21	37 19	48 25	46 31	49 32	48 28	37 25	31 15	29 12	42 20	38 33	36 30	35 27	39 35	36 40	40 20	43 9	38 11	41.2 23.8		
LISBON	MAX MIN	54 28	46 32	55 37	52 48	50 39	46 31	44 27	46 19	38 16	36 18	40 24	32 18	30 24	42 27	39 23																	

DAILY TEMPERATURES

NORTH DAKOTA
NOVEMBER 1948

Table 5-Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
MILNOR	MAX MIN	60 23	50 28	60 30	55 28	60 22	50 23	55 20	45 14	45 20	40 16	40 14	37 22	36 6	45 24	47 28	45 25	28 20	25 11	32 13	21 9	28 11	27 14	33 19	32 20	30 20	28 17	38 20	34 3	45 20	40 17	40.4 18.5	
MINOT CAA	MAX MIN	39 35	40 37	46 41	41 37	42 31	42 29	37 21	37 21	32 25	33 23	31 23	23 18	38 12	43 26	48 30	43 30	28 25	22 12	26 16	31 6	27 16	29 31	38 30	33 33	32 17	22 7	26 4	37 11	39 8	32 8	35.5 21.3	
MINOT EXP FARM	MAX MIN	48 34	39 35	47 33	42 38	42 32	42 30	37 22	36 20	33 24	33 23	33 20	24 16	38 9	41 24	48 31	43 30	38 26	30 25	25 15	29 8	27 14	38 20	38 31	34 30	33 18	22 9	25 7	35 37	37 17	30 8	35.6 21.6	
MOHALL	MAX MIN	46 30	43 34	43 33	43 37	44 27	42 26	37 22	39 20	35 20	33 20	32 20	25 19	37 11	43 22	47 29	42 27	36 21	27 24	25 10	30 3	27 9	38 20	37 26	32 30	30 8	18 -05	15 -01	36 -09	32 10	27 -01	34.7 18.1	
MOTT RR STATION	MAX MIN	58 32	52 29	53 24	45 33	45 32	44 29	40 18	37 13	35 23	36 22	37 19	36 20	46 8	51 23	48 28	45 30	48 24	36 26	29 17	39 5	31 18	42 12	43 31	46 25	37 26	40 19	36 24	44 9	39 25	38 9	41.9 21.8	
MUNICH 4 SW	MAX MIN	38 29	40 34	48 38	43 38	42 36	42 28	38 16	35 22	34 15	31 16	30 17	28 13	25 10	37 21	41 24	40 28	36 23	29 19	28 10	32 3	31 2	34 13	34 22	31 28	31 18	30 3	18 2	27 -12	29 7	27 5	33.5 17.8	
NAPOLEON 2 SE	MAX MIN	51 32	44 22	48 34	41 41	49 35	44 27	40 22	39 15	30 21	34 13	37 14	33 17	34 2	38 23	42 25	44 31	44 23	31 21	27 11	30 9	28 10	36 22	36 31	35 27	34 23	25 13	32 12	35 11	41 20	33 13	37.0 20.7	
NEW ENGLAND	MAX MIN	51 36	50 26	54 20	56 34	41 32	46 26	43 17	36 12	39 20	35 24	36 21	38 14	46 7	54 22	51 27	51 26	46 23	42 25	34 20	41 5	35 17	41 12	46 32	47 28	41 28	42 12	41 18	48 10	44 25	41 8	43.9 20.9	
NEW SALEM 1 S	MAX MIN	53 34	47 30	47 31	42 34	45 32	41 33	45 25	39 22	33 20	36 19	33 20	34 18	42 12	48 21	50 31	47 28	47 28	38 25	27 12	34 7	42 20	43 29	42 32	44 26	37 25	36 20	33 15	42 13	40 22	40 20	40.9 23.5	
OAKES WATER WORKS	MAX MIN	68 30	57 29	50 30	57 36	53 45	60 31	49 26	44 18	47 19	39 17	37 18	43 22	28 4	37 10	45 24	44 25	45 24	47 24	29 10	29 15	30 11	32 12	34 23	35 28	37 28	35 18	36 13	38 8	39 9	45 13	42.0 20.7	
PARK RIVER	MAX MIN	47 35	42 32	48 40	50 42	47 39	44 32	40 27	40 21	40 18	34 22	38 23	33 20	28 16	40 25	45 34	45 30	35 20	28 10	26 10	24 10	22 13	32 14	35 26	34 30	31 21	22 17	23 8	20 17	35 20	35 4	35.4 22.7	
PARSHALL	MAX MIN	50 26	40 32	50 31	45 36	45 32	44 25	39 18	37 15	33 22	33 22	38 20	30 12	39 11	42 21	46 30	45 26	46 21	30 22	28 18	36 3	27 10	39 20	39 26	38 25	35 22	27 19	28 17	40 5	36 18	36 9	38.0 20.5	
PEMBINA CAA	MAX MIN	41 34	42 34	49 41	50 43	46 35	41 32	41 29	40 20	38 19	35 19	34 24	30 20	29 18	38 24	43 24	40 27	31 19	25 15	29 7	15 5	19 15	25 13	32 25	32 29	22 19	22 18	28 6	27 -05	18 15	18 3	33.1 20.9	
PETERSBURG	MAX MIN	43 32	41 27	47 46	47 40	42 28	41 23	40 15	42 22	30 18	35 17	28 17	28 20	39 11	43 25	40 28	37 24	34 22	28 10	27 14	25 10	28 9	32 15	32 24	32 16	29 11	20 10	23 -06	29 15	34 15	24 15	34.1 19.1	
PETTIBONE	MAX MIN	53 34	43 35	45 38	48 41	46 36	43 27	41 21	40 14	33 19	35 14	39 15	28 16	32 10	45 25	43 29	43 30	47 26	35 21	27 11	31 10	29 10	37 22	37 30	35 25	34 22	22 18	33 7	35 5	40 22	30 9	37.6 21.4	
PORTAL	MAX MIN	54 26	45 32	38 36	44 35	38 31	47 27	41 19	36 18	36 20	35 20	32 17	33 16	29 13	39 20	41 25	45 28	42 23	34 21	28 23	23 5	35 20	26 23	36 30	37 17	33 14	28 -03	24 14	40 -03	38 20	30 2	35.6 19.9	
POWERS LAKE	MAX MIN	55 35	46 31	40 31	39 36	38 32	39 30	42 20	40 18	38 23	36 21	29 16	37 15	39 20	40 22	45 19	42 27	36 24	29 22	26 7	37 12	36 17	37 20	38 27	32 28	32 20	26 15	25 -04	25 16	28 16	30 20	35.7 21.2	
RICHARDTON ABBEY	MAX MIN	54 36	44 31	54 26	46 35	45 30	45 29	40 18	37 16	33 22	34 22	36 17	34 15	43 9	46 22	47 30	45 29	45 25	39 24	29 16	37 6	30 22	40 15	44 29	42 28	39 24	39 17	34 19	43 12	39 24	39 12	40.7 22.0	
RIVERDALE	MAX MIN	56 37	58 34	46 35	43 38	42 32	43 30	41 23	38 18	33 26	33 23	39 21	31 17	43 20	43 26	47 30	44 32	45 28	40 24	27 14	34 5	32 16	40 20	48 31	38 28	29 19	30 18	41 17	41 11	36 21	40.0 23.5		
ROLLA	MAX MIN	40 34	37 34	42 36	39 37	37 32	40 30	36 20	36 17	31 21	28 16	30 11	25 18	44 11	40 25	44 26	40 30	30 24	25 17	28 13	27 10	30 11	34 15	32 25	29 14	16 1	19 2	29 -09	31 13	21 2	31.8 18.5		
RUGBY 1 N	MAX MIN	47 29	42 36	48 38	43 36	40 24	43 18	37 16	38 23	32 17	33 13	24 9	32 16	39 20	45 28	40 28	35 23	40 22	30 11	29 3	31 7	29 16	34 32	35 27	35 11	32 27	12 -08	21 -08	31 -01	32 -01	29 -01	34.2 17.4	
SANISH	MAX MIN	56 28	42 32	39 36	53 33	42 33	47 32	43 23	40 22	37 21	34 21	34 24	35 18	42 14	47 21	45 23	42 30	42 25	28 22	25 24	32 6	28 16	41 21	42 27	37 26	32 21	29 21	28 8	46 12	35 7	38.1 21.8		
SHARON	MAX MIN	50 31	43 30	46 41	48 44	48 37	43 29	42 15	40 22	40 18	35 15	39 20	26 11	39 23	41 27	40 25	36 25	25 19	26 11	27 9	31 11	32 11	33 25	33 29	30 22	29 21	25 6	35 -06	34 20	30 4	35.9 20.6		
STKELE	MAX MIN	53 34	44 31	43 38	49 34	48 35	45 30	42 19	41 12	30 19	35 14	40 17	36 17	47 7	45 24	45 27	48 22	32 12	29 9	32 9	28 22	38 31	37 25	36 31	30 23	24 18	34 5	42 22	36 9	38.4 21.3			
TOWNER	MAX MIN	50 30	58 33	50 32	43 35	42 22	44 32	38 19	39 15	39 14	32 12	35 14	33 8	35 9	42 20	48 17	45 17	34 20	29 21	28 4	33 5	34 10	38 16	39 28	36 26	34 21	26 -10	16 -06	35 -07	33 10	22 1	37.0 15.7	
TURTLE LAKE	MAX MIN	48 36	41 33	49 36	43 39	42 33	45 30	40 20	37 16	34 24	33 20	38 17	29 14	40 13	43 25	45 30	44 25	46 30	35 25	34 14	27 5	38 11	37 20	36 31	36 								

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							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
ADAMS 7 S	0022	WALSH	RED	48 20	98 06		CST		7A				MYRA J BOTA	3
ALEXANDER RR STATION	0096	MC KENZIE	YELLOWSTONE	47 50	103 38	1200	MST		8A		8		ARTHUR J BAUMAN	3
ALMONT 7 W	0136	MORTON	HEART	46 43	101 39	2300	MST	7P	7P	6	6		HOGAN RAMSLAND	2 3 5
ALPHA I S	0149	GOLDEN VALLEY	LIT MISSOURI	46 37	103 49		MST		7P		23		H A BURY	3
AMIDON	0209	SLOPE	CANNONBALL	46 29	103 19	2908	MST	5P	5P	27	27		STANLEY W BALE	2 3 5
ARVILLA STATE PARK	0369	GRAND FORKS	RED	47 56	97 30	960	CST	6P	6P	5	5		ALBERT TROREN	2 3 5
ASRLEY	0382	MC INTOSH	MISSOURI	46 02	99 22	2025	CST	8A	8A	53	53		W E DREY	2 3 4 5
BALDHILL DAM	0450	BARNES	SHEYENNE	47 02	98 05	1300	CST	8A	8A	1	1		F A JOHNSON	2 3 5
BALFOUR RR STATION	0492	MC HENRY	SOURIS	47 57	100 32		CST		MID		8		C G THOMSON	13 4
BELCOURT INDIAN RES	0626	ROLETTE	PEMBINA	48 50	99 45	1960	CST	7P	7P	4	4		TURTLE MT INDIAN AG	2 3 5
BELFIELD	0639	STARK	HEART	46 52	103 11	2592	MST	7P	7P	31	31		CARL INDERGAARD	2 3 5
BEULAH	0766	MERCER	KNIFE	47 16	101 47	1780	MST		7P		34		KNIFE RIVER COAL MNG	3
BISBEE	0796	TOWNER	DEVILS LAKE	48 37	99 22	1601	CST	6P	6P	46	46		ROBERT L PETERSON	2 3 5
BISMARCK WATER WORKS	0809	BURLEIGH	MISSOURI	46 49	100 49	1628	CST		7A				BISMARCK WATER PLANT	3
BISMARCK WB CITY	0814	BURLEIGH	MISSOURI	46 48	100 48	1670	CST	10A	10A	74	74		U S WEATHER BUREAU	2 3 5
BISMARCK WB AIRPORT	0819	BURLEIGH	MISSOURI	46 46	100 45	1650	CST	MID	MID	9	9		U S WEATHER BUREAU	2 3 4 5
BOTTINEAU	0941	BOTTINEAU	SOURIS	48 50	100 27	1638	CST	4P	4P	57	57		N D SCHOOL OF FRSTRY	2 3 5
BOTTINEAU STATE PARK	0946	BOTTINEAU	SOURIS	48 56	100 22	2160	CST	6P	6P	5	5		PARK SUPT	2 3 5
BOWBELLS RR STATION	0961	BURKE	SOURIS	48 48	102 15	1958	CST	8A	8A	23	23		CHARLES KAUFMAN	2 3 5
BOWMAN COURT ROUSE	0995	BOWMAN	GRAND	46 11	103 23	2872	MST	5P	5P	34	34		O B HOOK	2 3 4 5
BREIEN	1052	NORTON	CANNONBALL	46 23	100 57	1719	CST		8A				MELVIN NELSON	2 3
BUTTE	1225	MC LEAN	SOURIS	47 50	100 47		CST	6P	6P	24	24		M O ANDERSON	2 3 5
CARRINGTON	1360	FOSTER	JAMES	47 27	99 08	1579	CST	7A	7A	51	51		SOO LINE AGENT	2 3 5
CARSON 2 SW	1370	GRANT	HEART	46 23	101 35	2500	MST	7P	7P	37	37		J W EVENS	2 3 5
CASSELTON	1400	CASS	RED	46 54	97 13	934	CST	5P	5P	53	53		WALLACE G SWEENEY	2 3 5
CAVALIER POWER PLANT	1435	PEMBINA	PEMBINA	48 48	97 38	894	CST	5P	5P	13	41		CITY LIGHT & POWER	2 3 5
CENTER	1456	OLIVER	MISSOURI	47 07	101 18	2100	MST	7P	7P	11	11		FRED L HEINZ	2 3 5
COCWELL 6 W	1525	SARGENT	JAMES	46 07	97 55	1291	CST		7A		4		JOHN WADDAHL	3
COLGATE	1686	STEELE	RED	47 14	97 39	1180	CST		6P		15		O M JENSEN	3
COOPERSTOWN	1766	GRIGGS	SREYENNE	47 26	98 07	1428	CST	5P	5P	52	52		R J LOCKNER	2 3 5
COURTENAY	1816	STUTSMAN	JAMES	47 13	98 34	1523	CST		6P		15		G R HANAWALT	3
CROSBY	1871	DIVIDE	SOURIS	48 54	103 18	1954	CST	7A	7A	42	42		VERNON V NICHOLS	2 3 5
DAWSON	2018	KIDDER	MISSOURI	46 52	99 45	1730	CST		MID		8		LOUIS J BILLINGTON	3 4
DEVILS LAKE WB CITY	2158	RAMSEY	DEVILS LAKE	48 07	98 52	1471	CST	MID	MID	44	73		U S WEATHER BUREAU	2 3 4 5
DICKINSON CAA	2183	STARK	REART	46 48	102 48	2587	MST	MID	MID	8	8		CAA	2 3 4 5
DICKINSON EXP STATION	2188	STARK	REART	46 53	102 48	2460	MST	7A	7A	57	57		LEROY MOOMAW	2 3 5 6
DRAKE	2298	MC HENRY	SOURIS	47 55	100 22	1634	CST	7A	7A	19	19		GEORGE A PAULUS	2 3 5
DUNN CENTER	2365	DUNN	KNIFE	47 21	102 37	2191	MST	6A	6A	50	50		FRANK R SOMMARS	2 3 5
DUNSEITH ST SANITARIUM	2385	ROLETTE	SOURIS	48 50	100 02	2001	CST	5P	5P	53	53		STATE TUBERCULOSIS	2 3 5
ECKMAN	2472	BOTTINEAU	SOURIS	48 39	101 03	1500	CST	7A	7A	43	43		E R SREMAN	2 3 5
EDGELEY EXP FARM	2482	LA MOURE	JAMES	46 20	98 42	1568	CST	6P	6P	48	48		N D AGRI EXP	2 3 5
EDMORE 1 W	2525	RAMSEY	DEVILS LAKE	48 25	98 29	1524	CST	8P	8P	25	25		MIKE DAVIS	2 3 5
ELBOWOODS	2570	MC LEAN	MISSOURI	47 35	102 09	2082	CST	6P	6P	56	56		R W CASE	2 3 5
ELLEDALE NORMAL SCR	2605	DICKEY	JAMES	46 00	98 31	1457	CST	8P	8P	50	50		J E DEMMER	2 3 5
EPPING	2735	WILLIAMS	MISSOURI	48 18	103 21	2224	CST	6P	6P	40	40		T BEACRLER	2 3 5
FAIRFIELD 9 N	2809	BILLINGS	LIT MISSOURI	47 19	103 12	2650	MST		6P		21		MRS EDITH LARSON	3
FARGO WB AIRPORT	2859	CASS	RED	46 54	96 48	895	CST	MID	MID	68	68		U S WEATHER BUREAU	2 3 4 5
FESSENDEN	2949	WELLS	JAMES	47 39	99 37	1610	CST	6P	6P	37	37		JOHN V ZUBER	2 3 5
FORMAN	3117	SARGENT	RED	46 06	97 38	1249	CST	6P	6P	57	57		ART WATERMAN	2 3 5
FORT YATES	3207	SIOUX	MISSOURI	46 05	100 38	1670	MST	6P	6P	49	49		P J JACOBSON	2 3 5
FOXHOLM WILDLIFE REF	3217	WARD	SOURIS	48 27	101 33	1609	CST	5P	5P	24	28		U S WILDLIFE REF	2 3 5
FULLERTON	3287	DICKEY	JAMES	46 10	98 25	1439	CST	6P	6P	51	51		F O ALIN	2 3 5
GACKLE	3309	LOGAN	JAMES	46 38	99 08	1951	CST	6P	6P	18	18		DAVID R RAMM	2 3 5
GARRISON	3376	MC LEAN	MISSOURI	47 38	101 25	1911	CST	MID	MID	72	72		MAE N VORACREK	2 3 4 5
GLEN ULLIN	3496	MORTON	REART	46 49	101 49	2090	MST		MID		8		NICK GAUER	3 4
GOLVA	3556	GOLDEN VALLEY	LIT MISSOURI	46 44	103 59	2781	MST	7P	6A	8	8		CHESTER K PUDA	2 3 5
GRAFTON STATE SCROOL	3594	WALSR	RED	48 25	97 26	827	CST	5P	5P	57	57		DR J C LAMONT	2 3 5
GRAND FORKS CAA	3616	GRAND FORKS	RED	47 56	97 05	834	CST	MID	MID	8	8		CAA	2 3 4 5
GRAND FORKS UNIVERSITY	3621	GRAND FORKS	RED	47 55	97 05	830	CST	MID	7P	58	58		UNIVERSITY OF N D	2 3 5
GRANO	3676	RENVILLE	SOURIS	48 37	101 35	1625	CST		MID				ALVIN C REINKE	3 4
GRANVILLE	3686	MC RENRY	SOURIS	48 16	100 51	1504	CST	7P	7P	42	42		FRED ROBLE	2 3 5
GRENORA	3736	WILLIAMS	MISSOURI	48 37	103 56	2114	CST	5P	5P	40	40		L D NIELSON	2 3 5
RALLIDAY	3846	DUNN	KNIFE	47 21	102 20	2073	MST		6P		7		JOHN KISSE	3
RANKINSON RR STATION	3908	RICRLAND	RED	46 04	96 54	1068	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
RANNAFORD	3926	GRIGGS	SREYENNE	47 18	98 12	1428	CST		MID		8		ROMER A BENSON	3 4
RANMAR	3936	CAVALIER	PEMBINA	48 59	98 41	1568	CST	6P	6P	55	55		A E PRIOR	2 3 5
HANSBORO	3963	TOWNER	PEMBINA	48 57	99 23	1597	CST	7P	7P	41	41		W E DISHER	2 3 5
HARVEY WATER WORKS	4013	WELLS	SREYENNE	47 45	99 53	1596	CST		6P		46		H J REYNOLDS	3
HAZELTON RR STATION	4083	EMMONS	MISSOURI	46 29	100 17	1978	CST		MID		8		EPHRAIN ZACHER	3 4
RETTINGER	4178	ADAMS	GRAND	46 00	102 38	2675	MST	6P	6P	42	42		EDGAR MARTIN	2 3 5
HURDSFIELD	4343	WELLS	JAMES	47 27	99 55	1915	CST		MID		8		ED BENSHOOF	3 4
JAMESTOWN CAA	4413	STUTSMAN	JAMES	46 55	98 41	1497	CST	MID	MID	8	8		CAA	2 3 4 5
JAMESTOWN STATE ROSP	4418	STUTSMAN	JAMES	46 53	98 40	1457	CST	7P	7P	57	57		N D STATE HOSPITAL	2 3 5
KENMARE	4646	WARD	SOURIS	48 40	102 05	1799	CST	MID	MID	17	17		THEO E ECKBERG	2 3 5
KENSAL WILDLIFE REFUGE	4656	STUTSMAN	JAMES	47 15	98 52	1440	CST	7P	7P	8	8		U S WILDLIFE REF	2 3 5
KRAMER 5 SE	4823	BOTTINEAU	SOURIS	48 39	100 37		CST		MID		9		PAUL A KRETSCHMAR	3 4
LA MOURE	4937	LA MAURE	JAMES	46 21	98 18	1382	CST	7P	7P	2	2		ANDREW REMICK	2 3 5
LANGDON EXP FARM	4958	CAVALIER	PEMBINA	48 45	98 21	1615	CST	5P	5P	53	53		V STURLAUGSON	2 3 5
LARIMORE	5013	GRAND FORKS	RED	47 54	97 38	1134	CST	7P	7P	56	56		JESSE P PHILLIPS	2 3 5
LEEDS	5078	BENSON	DEVILS LAKE	48 17	99 26	1515	CST	7P	7P	8	8		JOHN FAGAN	2 3 5
LINTON	5210	EMMONS	MISSOURI	46 16	100 14	1711	CST	8P	8P	32	32		WM HEYERMAN	2 3 5
LISBON	5220	RANSOM	SREYENNE	46 26	97 41	1091	CST	7A	7A	45	45		ROBERT M JODSAAS	2 3 5
MADDOCK AGR SCHOOL	5434	BENSON	SREYENNE	47 58	99 30	1604	CST	6P	6P	34	34		BENSON CY A & T	2 3 5
MANDAN EXP STATION	5479	MORTON	HEART	46 48	100 54	1750	MST	8A	8A	35	35		NO GT PLAINS FIELD	2 3 4 5 6
MANDAN FT LINCOLN PARK	5484	MORTON	MISSOURI	46 47	100 52	1700	MST	6P	6P	5	5		ISADORE W SMITH	2 3 5

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STATION	INDEX NO.	COUNTY	DRAINAGE	LAT. O /	LONG. O /	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
WANNING	5519	DUNN	KNIFE	47 14	102 46		MST	6P	6P	36	8		MISS JEANETTE S DAWES	3
WARMARTH	5573	SLOPE	LIT MISSOURI	46 18	103 55	2714	MST	6P	6P	40			S P GRANE	2 3 5
MAX	5638	MC LEAN	MISSOURI	47 49	101 17	2093	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
WAYVILLE	5660	TRAIL	RED	47 30	97 19	975	CST	6P	6P	53	53		H A RAGAZ	2 3 5
MC CLUSKY	5710	SREDIDAN	MISSOURI	47 29	100 29	1943	CST	11A	11A	24	31		J A HAMILTON	2 3 5
MC GREGOR RR STATION	572D	WILLIAMS	MISSOURI	48 36	102 56		CST		MID		8		HARTVIN H HERMANSON	3 4
MC RENTRY 5 N	573D	EDDY	SHEYENNE	47 38	98 35	1509	CST	8P	8P	26	26		C E BLASKY	2 3 5
MC LEOD 3 E	5754	RICKLAND	SHEYENNE	46 24	97 14	1075	CST	7P	7P	37	37		J G CARLSON	2 3 5
MC VILLE	5764	NELSON	RED	47 46	98 11	1467	CST		6P		5		H H KNIEFEL	3
MEDINA 1 W	5798	STUTSMAN	MISSOURI	46 53	99 19		CST		6P		8		RUDOLPH GRAF	3
MEDORA STATE PARK	5808	BILLINGS	LIT MISSOURI	46 55	103 33	2271	MST	5P	5P	5	34		HARRY ROBERTS	2 3 5
MEDORA TRNMP	5813	BILLINGS	LIT MISSOURI	46 58	103 3D	2250	MST	5P	5P				T ROOSEVELT NAT PARK	2 3 5
MILNOR	5933	SARGENT	RED	46 16	97 28	1117	CST	6P	6P	6	6		E W WILSON	2 3 5
MINOT CAA	5988	WARD	SOURIS	48 15	101 17	1724	CST	MID	MID	53	53		CAA	2 3 4 5
MINOT EXP FARM	5993	WARD	SOURIS	48 10	101 18		CST	6P	6P	3	3		N C AGRI EXP ST	2 3 5
MOFFIT RR STATION	6015	BURLEIGH	MISSOURI	46 41	100 18	1760	CST		9A		6		SOO LINE AGENT	3
MOHALL	6025	RENVILLE	SOURIS	48 46	101 31	1639	CST	9P	9P	55	55		IVER JOHNSON	2 3 5
MONTPELIER	6105	STUTSMAN	JAMES	46 42	98 35		CST		8A		8		ROLE HANSON	3
MOTT RR STATION	6155	HETTINGER	CANNON BALL	46 22	102 2D	2440	MST	6P	6P	42	42		NORTHERN PACIFIC AGT	2 3 4 5
MUNICH 4 SW	6195	CAVALIER	DEVILS LAKE	48 38	98 53	1598	CST	7P	7P	1	1		HAROLD FELDNER	2 3 5
NAPOLEON 2 SE	6255	LOGAN	MISSOURI	46 28	99 43	1955	CST	7P	7P	57	57		GLADYS J PETERSON	2 3 5
NEW ENGLAND	6315	HETTINGER	CANNONBALL	46 33	102 52	2621	MST	8A	8A	57	57		ADNA S HATCH	2 3 5
NEW SALEM 1 S	6365	MORTON	REART	46 50	101 25	2163	MST	6P	6P	45	45		WM F GAEBE	2 3 5
OAKES WATER WORKS	662D	DICKEY	JAMES	46 08	98 55	1318	CST	8A	8A	20	20		C M HAGEN	2 3 4 5
OMEMEE 3 SE	6703	BOTTINEAU	SOURIS	48 39	100 20		CST		MID		8		ARTHUR B VOLLMER	3 4
PARK RIVER	6857	WALSH	RED	48 23	97 45	998	CST	5P	5P	45	45		MARTIN SEVERSON	2 3 5
PARSALL	6867	MOUNTRAIL	MISSOURI	47 57	102 08	1929	CST	6P	6P	17	34		C E SHUBERT	2 3 5
PEMBINA CAA	6947	PEMBINA	RED	48 57	97 15	792	CST	MID	MID	75	75		CAA	2 3 4 5
PETERSBURG	7027	NELSON	RED	48 01	98 0D	1524	CST	7P	7P	5	18		F C OVERLAND	2 3 5
PETTIBONE	7047	KIDDER	MISSOURI	47 07	99 31	1856	CST	7P	7P	4D	4D		L H DETHLOFF	2 3 5
PORTAL	7201	BURKE	SOURIS	49 00	102 33	1954	CST	9A	9A	35	35		U S CUSTOMS SER	2 3 5
POWERS LAKE	7281	BURKE	MISSOURI	48 34	102 39	2205	CST	5P	5P	23	44		E J LEWIS	2 3 5
PRETTY ROCK	7311	GRANT	CANNONBALL	46 11	101 51		MST		6P		8		FREDA LEER	3
RAUB	7405	MC LEAN	MISSOURI	47 44	102 04		CST		MID		8		ALVIN LARSON	3 4
RICHARDTON ABBEY	7530	STARK	HEART	46 53	102 19	2467	MST	7P	7P	33	33		ASSUMPTION ABBEY	2 3 5
RIVERDALE GARRISON DAM	7585	MC LEAN	MISSOURI	47 3D	101 24	1910	CST	5P	5P	11	11		CORPS OF ENGINEERS	2 3 4 5
ROLLA	7664	ROLETTE	PEMBINA	48 52	99 37	186D	CST	7P	7P				THEO B FAGERLUND	2 3 5
RUGBY 1 N	7704	PIERCE	SOURIS	48 23	100 00	1542	CST	9P	9P	1	2D		BOYD C HAWK	2 3 5
RYDER	7749	WARD	MISSOURI	47 55	101 40	2108	CST		9A		2D		S C SCHELLENBAUM	3
SANISH	7834	MOUNTRAIL	MISSOURI	47 59	102 32	1835	CST	7A	7A	23	23		H J BUGGE	2 3 5
SARLES 3 E	7844	CAVALIER	PEMBINA	48 55	98 56		MST		MID		8		EARLE M TRELEAVEN	3 4
SEARING	7944	MC KENZIE	YELLOWSTONE	47 04	103 48		MST		MID		8		GLENN S MC RAE	3 4
SELFRIEDGE	7952	SIOUX	MISSOURI	46 32	100 56	2183	MST		7P		12		J B SMITH	3
SRARON	7986	STEELE	RED	47 36	97 54	1516	CST	8P	8P	22	25		HUGR LYON	2 3 5
SRERWOOD	8047	RENVILLE	SOURIS	49 0D	101 38	1647	CST		6P		1		U S CUSTOMS & IMN SER	3
STANLEY	8276	MOUNTRAIL	MISSOURI	48 19	102 24	2258	CST	7P	7P	11	11		LEROY EDWARDS	2 3 5
STEELE	8366	KIDDER	MISSOURI	46 51	99 55	1857	CST	8P	8P	55	55		LEON V LESHAR	2 3 5
TAGUS	8627	MOUNTRAIL	MISSOURI	48 2D	101 56	2179	CST		6P		2D		GEORGE N PILGARD	3
TIMMER	8727	MORTON	CANNONBALL	46 22	101 00	1742	MST		8A		11		JENNIE GIFFORD	3
TIOGA	8737	WILLIAMS	MISSOURI	48 24	102 56	2279	CST		6P		2D		L A SIMON	3
TOWNER	8792	MC HENRY	SOURIS	48 21	100 24	1482	CST	7P	7P	47	47		AUGUST B RIEDER	2 3 5
TROTTERS	8807	GOLDEN VALLEY	YELLOWSTONE	47 2D	103 54	2419	MST		5P		23		WALTER GRUNEWALD	3
TURTLE LAKE	8840	MC LEAN	MISSOURI	47 31	100 53	1899	CST	8P	8P	35	35		A S HAAS	2 3 5
TUTTLE 8 SW	885D	KIDDER	MISSOURI	47 02	100 04	1936	CST		8P		40		ADAM LENO	3
UNDERWOOD 12W	8877	MC LEAN	MISSOURI	47 26	101 24	1750	CST	6P	6P	24	37		MRS. F W MATTOON	2 3 5
UPHAM WILDLIFE REFUGE	8913	MC HENRY	SOURIS	48 37	100 44	1425	CST	5P	5P	8	8		U S WILDLIFE REF	2 3 5
VALLEY CITY	8937	BARNES	SHEYENNE	46 55	98 00	1229	CST	6P	6P	44	44		MISS I C ROBERTSON	2 3 5
VAN ROOK	8970	MOUNTRAIL	MISSOURI	47 57	102 21	1864	CST	9P	9P	8	8		ERWIN A VENTSCH	2 3 5
VELVA	8990	MC RENTRY	SOURIS	48 03	100 55	1511	CST	6P	6P	22	22		OSCAR ANDERSON	2 3 5
VERONA	9035	LA MOURE	JAMES	46 22	98 04		CST		10A		8		LOUIS J MANDSON	3
WARPETON POWER PLANT	9095	RICHLAND	RED	46 17	96 36	962	CST		MID		8		NEWTON O JONES	3 4
WARPETON STATE SCROOL	9100	RICHLAND	RED	46 16	96 36	962	CST	5P	5P	57	57		STATE SCR OF SCIENCE	2 3 5
WALRALLA	9155	PEMBINA	PEMBINA	48 56	97 55	966	CST		7P		8		PETER PAULUS	3
WASRBURN	9195	MC LEAN	MISSOURI	47 17	101 02	1731	CST	6P	6P	46	46		FRED F JEFFERIS	2 3 5
WATFORD CITY	9233	MC KENZIE	MISSOURI	47 48	103 17	2084	CST	8P	8P	36	36		J C ZELLER	2 3 5
WESTHOPE	9333	BOTTINEAU	SOURIS	48 55	101 01	1508	CST	6P	6P	43	43		REV R CAREY	2 3 5
WILDROSE	940D	WILLIAMS	MISSOURI	48 38	103 10	2258	CST		6P		19		JONATRON WINKJER	3
WILLISTON L C BRIDGE	9420	WILLIAMS	MISSOURI	48 07	103 44		CST						U S WEATHER BUREAU	7
WILLISTON WB CITY	9425	WILLIAMS	MISSOURI	48 09	103 35	1877	CST	MID	MID		70		U S WEATHER BUREAU	2 3 4 5
WILLOW CITY	9445	BOTTINEAU	SOURIS	48 36	10D 17	1471	CST	8P	8P	57	57		O M SANDERSON	2 3 5
WILTON RR STATION	9455	MC LEAN	MISSOURI	47 09	100 48	2159	CST	8A	8A	14	14		SOO LINE AGENT	2 3 5
WISREX	9515	MC INTOSH	MISSOURI	46 16	99 34	2D1D	CST	8A	8A	28	28		H M LARSON	2 3 5
NEW STATIONS														
BEACH	0590	GOLDEN VALLEY	LIT MISSOURI	46 55	104 01	2814	MST	7A	7A				LUTHER F HODGIN	2 3 5
HILLSBORO	4203	TRAIL	RED	47 24	97 04	901	CST	6P	6P	43	43		ALFRED JAHNKE	2 3 5
WASHBURN POWER PLANT	920D	MC LEAN	MISSOURI	47 17	101 02		CST							7

REFERENCE NOTES

The four digit identification numbers in the index number column of the Station Index are assigned on a State basis. There will be no duplication of numbers within a State.

Figures and letters following a station name indicate the distance in miles and direction from the post office of the same name.

Stations appearing in the Index, but for which data are not listed in the tables, are either missing or received too late for inclusion in this issue.

Delayed data and corrections will be carried only in the June and December issues of this bulletin.

Data in Tables 3, 5 and 6 are for the 24 hours ending at time of observation. See the Station Index for observation time.

When hourly precipitation is missing for several days, only the first and last days are shown in Table 4.

When hourly precipitation is accumulated over a period of 3 or more calendar days, with unknown hourly or daily distribution, the first and last days are shown in Table 4.

Unless otherwise indicated, dimensional units used in this bulletin are: Temperature in °F., precipitation and evaporation in inches, river stages in feet and wind movement in miles. Evaporation is measured in the standard Weather Bureau type pan of 4 foot diameter unless otherwise shown by footnote following Table 6.

-	No record.
+	And also on later dates.
*	Amount included in following measurement. Time distribution unknown.
//	Gage is equipped with wind shield.
6	No recording gage, precipitation measured at 6-hourly intervals.
B	Adjusted to a full month.
E	Water - equivalent of snowfall wholly or partially estimated, using a ratio of 1 inch water equivalent to every 10 inches of new snowfall.
M	One or more days of record missing. See Table 5 for detailed daily record.
R	Station equipped with recording gage only. All amounts in Table 3 are for the non-recording gages, except for stations with this reference.
SS	This entry in time of observation column in Station Index means sunset.
T	Trace, an amount too small to measure.
V	Includes total for previous month.
X	Observation time is 1:30 A. M. EST of the following day.
Z	Hourly amounts from recording gage at the same site may be found in Table 4.

Table 4 data were formerly published in Hydrologic Bulletins for Upper Mississippi and Missouri District. Amounts in this table are from recording gages.

Subscription Price: 15¢ per copy; \$1.50 a year. (Yearly subscription includes Annual Summary. Correspondence regarding subscriptions should be addressed to the Weather Records Processing Center, 1300 U. S. Court House, Chicago 4, Illinois).

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CLIMATOLOGICAL DATA

APP 3 1949

NORTH DAKOTA

DECEMBER 1948

Volume LVII No. 12



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CHICAGO: 1949

NORTH DAKOTA - DECEMBER, 1948

F. J. Bavendick, Section Director - Bismarck

GENERAL SUMMARY

The temperature averaged nearly three degrees below normal for the entire State. The eastern division had the least departure, being 1.7° below normal. The middle division was 3.3 below normal and the western division was 4.6° below normal. Most stations in the state reported lowest temperatures of from 15° to 30° below zero with the lowest readings reported from the north-central and northeast parts of the State. Highest temperatures occurred in the south and west parts of the State. Sunshine averaged about 10% above normal. Cloudiness averaged near normal, except below normal in southeastern portion.

Precipitation averaged above normal for the State. The eastern division averaged .02 inch below normal; central division averaged 0.37 inch above normal, and the western division averaged 0.32 inch above normal. The north-central part of the State generally measured more than 20 inches of snow during the month, while the southeast had only 2 to 5 inches. Little or no melting occurred during the month.

The weather generally was characterized by frequent snowfalls. Blizzard conditions prevailed at most places over the State about the 10th and again about the 20th. There was frequent drifting of snow especially in the northern and southwestern parts of the State on other dates also which caused most side roads to remain snowblocked a large part of the month. The month produced some of the heaviest snowfalls on record at some stations in the north-central part of the State, especially in Ward, Bottineau and McHenry counties. Feeding of livestock was done mostly under shelter and no serious difficulties were encountered by the heavy snows in providing feed.

TEMPERATURE

The mean temperature for the state was 10.4° , which is 2.9° below normal for the month. The monthly mean temperatures ranged from 17.9° at Hettinger to 3.7° at Hannah. The highest temperature recorded in the state was 59° at Mott, on the 2nd, and the lowest -35° at Bottineau on the 10th.

PRECIPITATION

The average precipitation for the state was 0.70 inch, which is 0.22 inch above normal for December. The total amounts recorded at various stations ranged from 3.17 inches at McGregor to 0.06 inch at Gackle. The heaviest rainfall reported in any one day was 1.00 inch at Rugby on the 15th. The monthly average of snowfall was 9.7 inches or 4.6 inches more than normal. The greatest monthly amount was 36.0 inches at Westhope; the least .6 inch at Gackle. The greatest depth on the ground was 33 inches at Westhope on the 15th.

ACKNOWLEDGMENTS

In addition to the climatological data from some 6,000 Weather Bureau and cooperative weather stations, this bulletin series contains records from Hydroclimatic Network Stations which were formerly reproduced in the Hydrologic Bulletin Series. The Hydroclimatic Network is a nationwide net of rain gages -- mostly of the recording type which produce continuous records of precipitation. It was established in 1939 at the request of the Corps of Engineers, Department of the Army, to supplement existing precipitation stations in order to provide records of rainfall intensity which were essential to the planning of flood control and related works by the Corps of Engineers. This Network, now numbering about 2,000 recording, and 1,000 non-recording rain gages, has been maintained by the Weather Bureau through working funds transferred annually to the Weather Bureau by the Corps of Engineers. These transfers averaged about \$250,000 per year between 1940 and 1944, and nearly \$375,000 since that date. For the years 1940-42, the Department of Agriculture transferred about \$100,000 per year to provide data required in its work, and since 1947 the Bureau of Reclamation has transferred about \$25,000 per year to meet the increasing needs of their program in the Western States.

Previous to the introduction of this bulletin Series, data from Hydroclimatic Network stations were presented in bulletins (Hydrologic Bulletins) which were issued monthly for each of 8 drainage areas embracing the entire United States, but since the Network was established to meet the internal requirements of the Federal agencies referred to above, no provision was made for public dissemination of the data, distribution being limited to cooperating agencies and to certain public repositories. A list of locations where reference copies of the Hydrologic Bulletin Series are available for inspection may be obtained upon application to Chief, U.S. Weather Bureau, Washington 25, D.C.

Many other records published in this bulletin have been made available through the cooperation of various public offices, private agencies, and individuals as listed in the Station Index.

PRESSURE, WIND, HUMIDITY, SUNSHINE, DEGREE DAYS

NORTH DAKOTA
DECEMBER 1948

STATIONS	SEA LEVEL PRESSURE EXTREMES—INCHES				WIND				RELATIVE HUMIDITY AVERAGES				SUN- SHINE	DEGREE DAYS 65° BASE
	HIGHEST	DATE	LOWEST	DATE	AVERAGE SPEED M.P.H.	MAXIMUM SPEED M.P.H.	DIRECTION	DATE	1:30A EST	7:30A EST	1:30P EST	7:30P EST	PERCENT OF POSSIBLE	
BISMARCK AIRPORT	30.68	25	29.10	20	10.3	36	NW	20	89	90	76	82	57	1667
DEVILS LAKE	30.77	25	29.03	20	9.6	28	NE	20	-	82	81	86	44	1777
FARGO AIRPORT	30.82	25	29.08	20	12.6	34	N	21	90	91	83	88	54	1655
WILLISTON	30.60	24	29.05	20	6.3	27	W	20	88	88	80	85	57	1719

TABLE 1
COMPARATIVE DATA

YEAR	TEMPERATURE			PRECIPITATION				YEAR	TEMPERATURE			PRECIPITATION			
	MEAN	HIGHEST	LOWEST	AVERAGE		AVERAGE SNOWFALL	DAYS WITH .01 OR MORE		MEAN	HIGHEST	LOWEST	AVERAGE		AVERAGE SNOWFALL	DAYS WITH .01 OR MORE
1892	7.1	60	-39	0.57		7.7	4	1922	8.5	55	-34	0.68		7.4	5
1893	4.7	55	-36	0.85		8.4	6	1923	22.2	62	-36	0.32		3.6	3
1894	19.1	70	-32	0.29		1.6	2	1924	2.9	58	-46	0.44		5.3	4
1895	13.8	62	-32	0.31		2.6	3	1925	16.5	67	-38	0.28		2.6	3
1896	16.4	53	-35	0.36		2.6	3	1926	9.2	55	-36	0.56		5.5	3
1897	10.8	69	-35	0.22		2.2	3	1927	1.8	43	-38	0.80		8.7	5
1898	12.1	51	-38	0.24		2.1	3	1928	20.7	57	-30	0.32		3.2	3
1899	12.8	60	-26	0.32		3.3	3	1929	12.5	59	-38	0.81		9.9	5
1900	17.3	58	-29	0.31		3.0	4	1930	19.9	53	-30	0.19		2.0	3
1901	12.4	61	-43	0.74		7.2	5	1931	21.0	58	-21	0.23		2.7	2
1902	7.8	49	-35	0.51		4.2	4	1932	12.4	60	-31	0.20		1.7	3
1903	11.6	57	-33	0.77		7.2	6	1933	8.6	62	-38	0.90		9.7	6
1904	14.2	55	-43	0.65		6.2	5	1934	12.6	53	-44	0.30		3.9	5
1905	15.3	55	-34	0.16		1.6	4	1935	12.6	51	-34	0.50		5.6	5
1906	8.4	48	-40	1.09		10.7	6	1936	15.0	59	-36	0.43		5.5	4
1907	20.1	68	-26	0.30		3.1	3	1937	11.4	51	-33	0.54		6.5	6
1908	14.4	62	-37	0.36		3.7	3	1938	18.2	55	-41	0.32		4.1	4
1909	5.2	54	-42	1.28		12.1	7	1939	26.7	70	-20	0.28		2.3	4
1910	12.9	56	-34	0.43		4.6	4	1940	19.8	59	-36	0.42		4.0	4
1911	14.9	61	-33	0.35		4.5	4	1941	22.5	66	-20	0.15		1.8	3
1912	18.9	72	-28	0.43		4.0	4	1942	10.9	53	-30	0.53		7.1	7
1913	22.7	61	-21	0.06		0.3	1	1943	21.5	65	-22	0.12		1.0	2
1914	5.4	57	-42	0.47		5.7	4	1944	15.8	50	-27	0.06		0.9	1
1915	15.8	57	-27	0.52		5.4	5	1945	7.0	56	-38	0.64		8.8	6
1916	2.7	61	-50	1.18		13.9	5	1946	13.3	55	-35	0.58		6.2	6
1917	0.7	58	-44	0.59		7.4	6	1947	14.2	54	-36	0.42		5.5	4
1918	18.5	65	-41	0.88		9.9	5	1948	10.4	59	-35	0.70		9.7	7
1919	7.4	49	-38	0.47		4.8	3	PERIOD	13.3	72	-50	0.48		5.1	4
1920	15.2	59	-32	0.32		3.2	3								
1921	16.5	59	-33	0.41		3.9	4								

CLIMATOLOGICAL DATA

NORTE DAKOTA

DECEMBER 1948

Table 2

Station	Temperature								Precipitation									
	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Total	Departure from normal	Greatest day	Date	Snow, Sleet, Hail			No. of days		
							Max. 90° or above	Min. 32° or below					Total	Max. depth on ground	Date	.01 or more	.25 or more	1.00 or more
EASTERN DIVISION																		
ARVILLA STATE PARK	8.6		40	2	-28	10+	31		.70		.21	10+				7		
CARRINGTON	10.2	-2.4	42	3+	-18	10			.24	-.17	.07	16+	3.4			4		
CAVALIER POWER PLANT	8.5	-2.0	39	2	-27	10+	31		1.33	-.64	.22	16	19.2	17	19	12		
COOPERSTOWN	9.9		42	2	-20	10	31		.71		.31	14	7.6			3		1
DEVILS LAKE WB CITY	7.7	-1.8	41	2	-22	9+	31		.79	.25	.19	20	14.2	13	15	11		
EDGELEY EXP FARM	15.7	0.7	54	2	-17	10	31		.11	-.38	.05	15	1.6	T	15	5		
EDMORE 1 W	5.4	-5.1	38	2	-29	10	31		1.10	-.56	.36	15	14.5	19	21+	8		2
ELLENDALE NORMAL SCH	14.3	-2.0	43	3	-18	10	31		.15	-.31	.07	19	2.0	1	19	4		
FARGO WB AIRPORT	11.7	0.2	43	2	-22	25	31		.37	-.35	.11	15	3.8	4	20+	8		
FORMAN	16.3	1.0	51	3	-13	10	31		.08	-.48	.08	15	1.0			1		
FULLERTON	16.0	0.8	51	3	-15	10	31		.17	-.60	.07	19	1.7	T	8+	5		
GACKLE	13.4	-1.1	52	3	-16	10	31		.06	-.39	.01	7+	.6			6		
GRAFTON STATE SCHOOL	8.7m	-2.0	40	2	-30	25			1.23	.70	.50	21	13.5			10		1
GRAND FORKS CAA	7.6	-3.4	40	3	-28	25	31		.77	.15	.23	20	10.7	11	20+	11		
GRAND FORKS UNIVERSITY	8.3	-2.7	38	2+	-25	25	31		1.05	.43	.26	10	9.5	12	20+	12		1
HANKINSON RR STATION	14.8	-2.9	55	1	-15	10+	31		.09	-.43	.05	11	1.7			3		
HANNAH	3.7m	-3.9	35	2	-31	10												
HILLSBORO	10.2	-1.8	40	2	-25	25	31		.66	.02	.26	10	8.4			7		1
JAMESTOWN CAA	12.4	-1.5	50	2	-16	9	31		.13	-.52	.07	15	1.5	1	10+	6		
JAMESTOWN STATE HOSP	13.2	-0.7	50	2	-15	10	31		.08	-.57	.04	15	1.1			3		
KENSAL WILDLIFE REFUGE	10.0		48	2	-21	10	31		.12		.05	10	2.2			4		
LA MOURE	15.5		52	2	-10	9+	31		.09		.03	10	0.9			5		
LANGDON EXP FARM	5.0	-3.8	35	2	-32	10	31		1.44	.81	.30	15	14.8			14		1
LARIMORE	9.3	-2.2							.34	-.22	.18	10	5.4			5		1
LISBON	14.8		47	3	-16	10	31		.09	-.42	.03	19	1.3			4		
MAYVILLE	11.1	-2.2	42	2	-25	25	31		.50	-.02	.14	20	4.2	6	15+	9		
MC HENRY 6 N	8.1	2.7	40	2	-25	10	31		.66	.17	.22	15	6.3	7	21+	8		
MC LEOD 3 E	16.2	1.1	53	2	-17	24	31		.06	-.40	.06	10	1.0			1		
MILNOR	12.0		48	3	-17	25	31											
MUNICH 4 SW	4.5		34	2	-29	10	31		1.10		.55	15	16.2			8		1
OAKES WATER WORKS	14.0	-2.2	50	4	-12	10	31		.35	-.15	.30	16	4.0			2		1
PARK RIVER	9.1	-2.0	39	2+	-24	25	31		.43	-.08	.14	20	5.0	12	20	6		
PEMBINA CAA	5.8	-1.2	37	2	-28	25	31		.60	-.02	.19	15	5.6	8	20+	10		
PETERSBURG	7.4		38	2	-25	10	31		1.23	.30	.13+	13+	11.8			8		3
SHARON	9.7	-2.5	41	2	-22	10	31		.49	.01	.16	14	4.9	9	20	6		
VALLEY CITY	13.5	-1.0	47	2	-15	25	31		.39	-.19	.13	10	4.0			6		
WAPETON STATE SCHOOL	14.4	-1.4	48	3	-18	25	31		.25	-.25	.05	10+	3.2	12	17+	8		
DIVISION	10.7	-1.7							.51	-0.02			6.1					
MIDDLE DIVISION																		
ASHLEY	12.8m	-2.0	51	3+					.08	-.42	.04	20	1.5			3		
BELCOURT INDIAN RES	6.0		39	2	-32	9+	31		1.11		.37	15	21.4			10		1
BISBEE	5.9	-3.8	37	3	-22	9	31		2.06	1.79	.69	15	25.8			8		2
BISMARCK WB CITY	11.6	-4.1	58	3	-19	23	31		.33	-.15	.11	19				8		
BISMARCK WB AIRPORT	11.2	-1.6	57	2	-20	23	31		.36	-.21	.11	19	5.8	3	15+	9		
BOTTINEAU	5.3	-3.0	39	2	-30	10	31		1.46	.99	.46	15	13.5	20	16+	8		2
BOTTINEAU STATE PARK	8.7		45	3	-35	10	31		.84		.20	12	10.8			8		
CARSON 2 S W	15.0	-1.6	58	3	-17	9	31		.25	-.23	.12	19	4.7	6	19	4		
CENTER	9.8	-6.6	56	2	-21	23	31		.58	.14	.25	14	7.2	6	14+	8		1
DRAKE	8.8	-6.6	47	3	-19	10	31		.91	.50	.22	15	19.3	20	22	11		
DUNSEITH ST SANITARIUM	7.1	-3.2	38	2+	-28	10	31		1.29	.86	.34	15	13.5			9		1
ECKMAN	4.6	-5.7	40	3	-27	10+	31		1.28	.81	.39	15	24.0	27	21+	12		2
FESSENDEN	10.8	-1.0	43	3	-17	9	31		.88	.32	.52	15	14.0	8	15	3		1
FORD YATES	17.3	-1.9	56	2	-17	18	31		.31	-.07	.15	15	4.0			3		
GARRISON	9.8	-4.6	56	2	-18	9+	31		1.19	.71	.52	15	12.8	12	16+	8		2
GRANVILLE	8.5m	-4.5	46	2	-21	10			1.30	.84	.50	15	21.2	18	16+	10		1
HANSBORO	4.2m	3.6	34	7	-34	23			.24	-.37	.19	14+	3.0			5		
LEEDS	8.6		40	2	-24	10	31		1.20		.41	15	21.8			9		1
LINTON	14.2	-1.1	56	2	-17	10	31		.37	-.02	.10	15	3.8	3	19+	6		
MADDOCK AGR SCHOOL	8.6	-2.8	44	2	-24	10	31		.98	.55	.29	15	13.7			8		1
MANDAN EXP STATION	12.3	-2.8	57	3	-14	9+	31		.31	-.14	.11	20	5.7			8		
MANDAN FT LINCOLN PARK	15.9m		57	2	-16	23	31		.44		.24	15	4.8	4	15+	6		
MAX	9.0	-5.4	55	3	-19	10	31		.29	-.11	.11	15	7.5	8	21	4		
MC CLUSKY	10.5	-3.2	53	3	-17	9+	31		.64	.12	.22	15	9.0			4		
MINOT CAA	9.5	-3.6	47	2	-19	9	31		.82	.36	.44	14	14.7	15	15+	8		1
MINOT EXP FARM	9.7		44	2	-19	9+	31		.52		.23	15	10.9	12	16+	9		
MOHALL	5.8	-5.9	42	2	-24	9	31		1.51	1.09	.32	14	19.7	24	20	11		2
NAPOLEON 2 SE	12.8	-0.6	50	3	-16	9	31		.18	-.27	.04	19	1.6	2	21+	7		
NEW SALEM 1 S	12.7	-3.5	56	2	-16	9	31		.33	-.18	.10	15+	6.8	7	20	7		
PETTIBONE	11.0	-0.7	50	3	-20	10	31		.28	-.16	.08	15	4.3	3	10+	7		
RIVERDALE	12.5m		55	2					.79		.40	15	15.0	11	19	7		1
ROLLA	6.8	-3.4	37	30	-29	10	31		1.90	1.41	.71	15	15.0	26	20+	12		2
RUGBY 1 N	6.4		39	2	-24	10	31		2.09		1.00	15	21.0	24	15	6		3
STEELE	10.8	-2.4	51	2	-17	23	31		.31	-.18	.15	15	3.7			4		
TOWNER	7.3	-3.9	42	2	-24	9	31		1.40	.91	.55	14	20.5			8		2
TURTLE LAKE	10.3	-3.0	53	2	-20	9	31		.48	.02	.39	15	8.4			4		1
UNDERWOOD 12 W	10.0	-6.2	55	2	-25	23	31		.90	.47	.40	15+	14.0			3		2
UPHAM WILDLIFE REFUGE	5.1		41	2	-29	18	31		1.34		.47	15	22.0	22	15	9		3
VELVA	9.9	-5.1	49	2	-21	18	31		.89	.42	.43	15	13.3	15	15+	11		1
WASHBURN	12.8	-2.7	56	2	-16	9+	31		.44	.01	.16	15	6.0	6	20+	6		
WESTHOPE	5.0	-5.2	41	2	-28	9	31		1.64	1.22	.46	15	36.0	33	15	9		2
WILLOW CITY	5.2	-4.																

See reference notes following Station Index.

CLIMATOLOGICAL DATA

NORTH DAKOTA

DECEMBER 1948

Table 2-Continued

Station	Temperature								Precipitation									
	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Total	Departure from normal	Greatest day	Date	Snow, Sleet, Hail			No. of days		
							Max. 90° or above	Min. 32° or below					Total	Max. depth on ground	Date	.01 or more	.25 or more	1.00 or more
WESTERN DIVISION																		
ALMONT 7 SW	15.0		57	2	-15	9	31	.44		.26	15	5.3	4	15	7	1		
AMIDON	14.8	-4.3	57	2	-17	9	31	.23	- .16	.08	19		5	19+	9			
BEACH	14.1		53	2	-23	9	31	.45		.17	14	8.6	4	14+	7			
BELFIELD	13.6	-6.2	55	2	-18	9	31	.52	.04	.10	4+	4.5	6	23+	7			
BOWBELLS RR STATION	7.1	-5.8	44	3	-24	9+	31	1.12	.74	.27	5	12.5	16	21	9	2		
BOWMAN COURT HOUSE	14.8M	-2.8	46	3				.25	- .10	.12	20	2.8	2	19	3			
CROSBY	5.0		41	3	-24	9+	31	1.05		.32	16	16.2	16	23	10	2		
DICKINSON CAA	13.2	-3.6	56	2	-18	9	31	.50	.04	.24	15	5.1	5	15+	7			
DICKINSON EXP STATION	12.2	-4.6	57	3	-18	9	31	.41	- .05	.20	15	5.2	5	15+	5			
ELBOWOODS	11.2M	-4.7	55	2			31	.24	- .16	.10	10		2	10+	6			
EPPING	8.1M	-7.1	55	2	-18	17+		.71	.26	.22	15		15	20	6			
GRENORA	8.8M	-3.5	43	3	-25	17		.72	.20	.25	15	14.5		4	5	1		
HETTINGER	17.9M	-0.4	58	2+				.31	- .06	.15	15	5.3		4	4			
KENMARE	9.0	-5.2	43	3	-23	10	31	1.73	1.30	.43	15	22.5	25	21	10	3		
WARMARTH	13.2M	-5.3	55	2	-18	17		.61	.21	.25	20	9.8	5	20+	8	1		
MEDORA STATE PARK	13.2	-6.3	56	2	-24	18	30	.57	.09	.20	14	3.0	4	15	7			
MEDORA T R N M P	12.9		56	2	-27	18	31	.46		.35	14		4	14+	4	1		
MOTT RR STATION	15.0	-0.8	59	2	-16	17	31	.48		.35	17	5.3		15	3	1		
NEW ENGLAND	16.9	-0.5	57	2	-17	9	31	.69	.29	.55	15	5.9	6	15	3	1		
PARSHALL	7.6	-6.9	53	2	-25	18	31	.73	.32	.26	14	11.0	11	20+	7	1		
PORTAL	5.0	-7.6	41	3	-28	9+	31	2.17	1.72	.60	16	21.0	16	20+	10	2		
POWERS LAKE	6.3	-9.5	43	2	-25	9	31	1.52	.98	.60	4	17.5	19	21+	7	3		
RICHARDTON ABBEY	15.7	-0.5	57	2	-16	9	31	1.02	.60	.40	15	11.7	10	15	7	1		
SANISH	7.0	-6.5	52	3	-25	24	31	1.10	.65	.30	15	13.8	5	14	8	1		
STANLEY	5.2		46	2	-24	9+	31	.70		.27	14	19.1			6	1		
VAN HOOK	8.4		55	2	-24	18+	31	.63		.22	15	14.0	14	21+	7			
WATFORD CITY	11.4	-3.9	55	2	-22	9	31	1.11	.58	.33	14	15.8			8	1		
WILLISTON WB CITY	9.5	-4.3	55	2	-21	9	31	1.01	- .43	.30	4	15.0	12	16	12	2		
DIVISION	11.1	-4.6						.77	.32			11.0						
STATE	10.4	-2.9						.70	.22			9.7			7			

DELAYED DATA

AUGUST 1948																		
GOLVA	72.0	4.8							1.50	-0.10	1.25	28				2	2	1
SEPTEMBER 1948																		
BELFIELD	62.6	4.6	103	15	30	9	6	2	.19	-1.15	.19	7				1		
NOVEMBER 1948																		
CARRINGTON	28.4	1.1	60	1	1	21+		25	0.58	0.03	.32	5	1.0	T	9+	6	1	
STANLEY	26.7		50	5	-03	28		29	1.23	0.69	.38	5	7.0			8	1	

See reference notes following Station Index.

NORTH DAKOTA
DECEMBER 1948

NORTH DAKOTA
DECEMBER 1948

See reference notes following Station Index.

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DAILY PRECIPITATION

NORTH DAKOTA
DECEMBER 1946

Table 3-Continued

Station	Day of month																															Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ROLLA				T	.15	.13	.07	T	.08	.02	.01		.11	.80	.71	.13			T	.22	.02				T							1.90
RUGBY 1 N				T	.05	T	.12			.02			.30	.60	1.00				T	T												2.09
RYDER						.05		.10			.02	.02		T	.20	.15					.09	.02		.10					.10			0.74
SANISH					.06				.12	.20				.20	.30				*		.09		.09									1.10
SARLES	R //				.15	.13	.02		.03	.21	.06		.09	.26	.59	.03			*		.49				.01							2.07
SHARON				T		.07	.05			.06				.16	.07	T					.06											0.49
SEERWOOD				.16	.20	T	T		.05	.04			.25	.30	.56	.09					.10											1.75
STANLEY				.06	T			.08		T			.04	.27	.24	T					.06											0.70
STEELE				.10	T			T	.04	T				.02	.15					T	T											0.31
TAGUS				.08	.04	T		T	.04	T	.11			.10	.17					T	.05	.03	.03									0.60
TIOGA					.14				.10			.13		*	.40						.12	.10										0.99
TOWNER					.06	.06	.06		.10	T	T			.55	.40					.02	.15											1.40
TROTTERS				.13	T			.03		.03	T		T	.21	.03	T				.06	T	.03			T							0.54
TURTLE LAKE					.02	T		T	.03	.03	T			.39						T	T	.04			T							0.46
TUTTLE 6 SW					.13	.02		.03		.12				.23							T	.12										0.67
UNDERWOOD 12 W				T	T	T			T	T	T	T	.10	.40						T		.07	T									0.90
UPHAM WILDLIFE REFUGE					.06	.11	.07		T	.25	T		.02	.17	.47	.12				T		.03			T							1.34
VALLEY CITY					T	T	.12			.01	.13			.06						.02	.03											0.39
VAN HOOK				T	.03			T	.02	.07				.16	.22					T	.05	.06										0.63
VELVA				T	.02	.04	.03	.01	.04	.06	T		.04	.15	.43					.02	T	.05			T							0.69
WAHPETON POWER PLANT	R								.04	.14				.06	.03					.04	.03											0.34
WAHPETON STATE SCHOOL					.02	T	.03		.03	.05	.04			.05	T					.02	.01											0.25
WASHEBURN								T	.06				T	.10	.16					.03	.07	.02			T							0.44
WATFORD CITY				.12	.04			.06		.09				.33	.19					.22	.06											1.11
WESTHOPE				.06	.11	.11	.04			.18			.13	.37	.46							.21										1.64
WILDROSE				.40	.05			.02	.10	.04	T		.10	.10	.37					T		.47										1.65
WILLISTON WB CITY	R	T			.30	.02	T	T	.02	.06	T		.03	.27	.19	.02				.01	.06	.02	T	T	T			T	T	T		1.01
WILLOW CITY				.09	.05	T			.09			.01		.15	.25	.43				.03	.06											1.17
WILTON RR STATION					.02	.01			.03					.06	.09	.03				.01	.05	.01										0.32
WISHEK				.01	.01				.02					T	T	.02				.02	T	T			T							0.06

DELAYED DATA

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See reference notes following Station Index.

REFERENCE NOTES

The four digit identification numbers in the index number column of the Station Index are assigned on a State basis. There will be no duplication of numbers within a State.

Stations appearing in the Index, but for which data are not listed in the tables, are either missing or received too late for inclusion in this issue.

Delayed data and corrections will be carried only in the June and December issues of this bulletin.

Data in Tables 3, 5 and 6 are for the 24 hours ending at time of observation. See the Station Index for observation times.

When hourly precipitation is missing for several days, only the first and last days are shown in Table 4.

When hourly precipitation is accumulated over a period of 3 or more calendar days, with unknown hourly or daily distribution, the first and last days are shown in Table 4.

Unless otherwise indicated, dimensional units used in this bulletin are: Temperature in °F., precipitation and evaporation in inches, river stages in feet and wind movement in miles.

-	No record.
+	And also on later dates.
*	Amount included in following measurement. Time distribution unknown.
//	Gage is equipped with wind shield.
6	No recording gage, precipitation measured at 6-hourly intervals.
B	Adjusted to a full month.
E	Water - equivalent of snowfall wholly or partially estimated, using a ratio of 1 inch water equivalent to every 10 inches of new snowfall.
M	One or more days of record missing. See Table 5 for detailed daily record.
R	Station equipped with recording gage only. All amounts in Table 3 are for the non-recording gages, except for stations with this reference.
SS	This entry in time of observation column in Station Index means sunset.
T	Trace, an amount too small to measure.
Z	Hourly amounts from recording gage at the same site may be found in Table 4.

Table 4 data were formerly published in Hydrologic Bulletins for Upper Mississippi and Missouri District. Amounts in this table are from recording gages. Traces are not shown.

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Daily river stages will not be published in Climatological Data in the future. They will be published annually in the publication "Daily River Stages - Principal Rivers of the United States".

Table 4

HOURLY PRECIPITATION

NORTH DAKOTA

DECEMBER 1948

Station	A. M. Hour ending												P. M. Hour ending												Total	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
-1st-																										
MC GREGOR RR STATION	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
-4th-																										
GARRISON	.02			.01	.	.01		.01		.01		.01		.01		.01	.01	.03	.01						.07	
GOLVA	//									.01		.01		.01		.01		.01							.09	
GRANO	//									.01		.01		.01		.01		.01		.01		.02		.01	.07	
WILLISTON WB CITY									.01		.03	.02		.02	.03	.03	.02	.04	.03	.03	.02	.01	.01		.01	.30
-5th-																										
BISMARCK WB AIRPORT			.01			.01		.01																	.02	
DAWSON					.01	.02	.01	.01				.01		.02	.01	.01	.01								.05	
DEVILS LAKE WB CITY										.01		.01		.01		.01									.06	
DICKINSON CAA			.01			.01																			.02	
EDGELEY EXP FARM		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	.05	
GRAND FORKS CAA	//																						.01	.01		
GRANO	//	.02		.02		.01	.03	.01		.01	.02		.02	.01	.01	.01	.01	.01	.01	.01				.01	.23	
HAZELTON R R STATION	//	.02	.01	.02		.01	.02		.01	.01	.01		.02	.01	.01	.01	.01	.01	.01	.01				.01	.09	
HURDSFIELD										.01	.01		.02	.01	.01										.05	
MINOT CAA	//									.03	.01	.01													.05	
OMEMEE 3 SE		*	*	*	*	*	*	*	*	.05	.01														.06	
RIVERDALE		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	.03				.03	
SARLES 3 E	//				.02	.01	.01	.01	.01	.01	.01	.02	.01	.01				.01						.15		
WILLISTON WB CITY				.01	.01																				.02	
-6th-																										
DEVILS LAKE WB CITY				.01				.01																	.01	
FARGO WB AIRPORT	//																								.03	
GRAND FORKS CAA	//		.01					.01				.01							.01	.01	.01	.01	.01		.01	
GRANO	//	.02	.01	.01	.02	.01				.01		.01				.01		.01		.01	.01	.01			.08	
HURDSFIELD				.01		.01													.01	.01	.01				.13	
MC GREGOR RR STATION		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	.60								.02	
MINOT CAA	//	.01	.01	.01																					.04	
PEMBINA CAA	//	.01	.01	.01	.01							.01	.01	.01	.01	.01	.02	.01						.01	.13	
SARLES 3 E	//	.01	.01					.01	.02			.01	.01	.01	.01	.01	.01	.01		.01		.01	.01	.01	.13	
-7th-																										
DEVILS LAKE WB CITY		.02	.01	.01																					.04	
FARGO WB AIRPORT	//							.01										.01							.02	
GRANO	//		.01	.02		.01																			.04	
HURDSFIELD				.01		.01																			.02	
MINOT CAA	//																							.01		
PEMBINA CAA	//	.01																							.01	
SARLES 3 E	//		.01	.01																.01		.01	.01	.01	.02	
-8th-																										
BISMARCK WB AIRPORT																				.01	.01	.01	.01		.04	
GARRISON																				.02	.01	.01			.04	
GRANO	//																			.01	.01	.02	.02	.05	.13	
HAZELTON RR STATION	//																				.02		.01	.01	.05	
HURDSFIELD																					.01	.01	.01		.03	
JAMESTOWN CAA	//	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	.04	
MANDAN EXP STATION																					.04				.04	
MC GREGOR RR STATION																.01	.02	.01		.01	.02	.03	.02	.01	.14	
MINOT CAA	//																.01	.01	.01	.01	.01	.01			.06	
RIVERDALE																				.01					.01	
WILLISTON WB CITY																.01	.01								.02	
-9th-																										
DEVILS LAKE WB CITY		.01			.01																				.02	
FARGO WB AIRPORT	//							.01																	.01	
GRANO	//	.02	.02	.01		.01																			.06	
HAZELTON RR STATION	//	.01	.01	.01																					.03	
JAMESTOWN CAA	//	*	*	*	*	*	*	*	*	*	*	.04													.04	
MCGREGOR RR STATION			.01						.01																.02	
SARLES 3 E	//	.01	.01	.01																					.03	
WABPETON POWER PLANT						.01	.02	.01																	.04	
-10th-																										
BISMARCK WB AIRPORT												.01	.01	.01											.03	
BOWMAN COURT HOUSE	//								.01	.03	.01	.01	.01	.01	.01	.01	.02	.01							.07	
DEVILS LAKE WB CITY													.02	.02	.03	.01	.02	.01							.11	
DICKINSON CAA													.02	.02				.01							.03	
FARGO WB AIRPORT	//												.01	.02	.01	.01	.01	.01	.02						.09	
GARRISON														.02	.02	.02	.01								.05	
GLEN ULLIN													.03	.02	.01										.06	
GOLVA	//							.01	.02	.02	.01		*	*	*	*	*	*	*	*	*	*	*	*	.06	
GRAND FORKS CAA	//												*	*	*	*	*	*	*	*	*	*	*	*	.18	
GRANO	//		.01	.01	.01		.01		.01	.03	.01	.03	.02	.02	.01	*	*	*	*	*	*	*	*	*	.04	
HANNAFORD																									.03	
HAZELTON RR STATION	//	-	-	-	-	-	-	.01	-	-	-	-	.01	-	-	-	.01	-	-	-	-	-	-	-	.09	
HURDSFIELD																									.06	
JAMESTOWN CAA	//																.01	.01							.03	
MC GREGOR RR STATION					.01	.02		.02	.02	.01	.01	.01	.02	.01											.13	
MINOT CAA	//									.01	.01	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.05	
MOTT RR STATION													*	*	.03										.13	
OMEMEE 3 SE										.01	.01	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.05	
PEMBINA CAA	//																								.05	
RIVERDALE				.01						.01		.02	.01							.01	.01				.21	
SARLES 3 E	//									.02	.02	.02	.02	.02	.03	.02	.01	.01	.02	.01	.01				.14	
WABPETON POWER PLANT													.01	.01		.02	.04	.02	.01	.01	.01	.01			.06	
WILLISTON WB CITY					.01					.01	.02	.02														
-11th-																										
DAWSON																						.01	.01	.01	.03	
GARRISON																									.03	
GRAND FORKS CAA	//	*	*	*	*	*	*	*	.25																.25	
GRANO	//	.01	.01																						.02	
HURDSFIELD																									.03	
JAMESTOWN CAA	//	.01	.01		.01																					

HOURLY PRECIPITATION

NORTH DAKOTA
DECEMBER 1948

Table 4-Continued

Station	A. M. Hour ending												P. M. Hour ending												Total
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
DEVILS LAKE WB CITY																		.01	.01						.03
GOLVA	//																						.01	.04	.07
GRANO	//																					.01	.02	.01	.04
HURDSFIELD																						.02	.03	.01	.02
MINOT CAA	//																					.03	.03	.01	.09
OMEMEE 3 SE																						.01	.01	.01	.02
WILLISTON WB CITY																									.01
-13th-																									
BISMARCK WB AIRPORT																		.01	.01						.01
BOWMAN COURT HOUSE	//	.01	.03	.01						.01															.02
DEVILS LAKE WB CITY																						.02	.01	.02	.01
DICKINSON CAA																									.06
GLEN ULLIN																						.01	.01	.01	.03
GOLVA	//	.02	.01	.01	.01			.01	.01	.01												.01	.01	.01	.08
GRAND FORKS CAA	//			.01	.01	.01																			.03
GRANO	//		.01	.01																					.03
MC GREGOR RR STATION									.04																.01
MINOT CAA	//		.01																						.04
MOTT RR STATION																			.01	.02					.02
OMEMEE 3 SE		.02	.01	.01																					.03
PEMBINA CAA	//		.01	.02	.01																				.04
SARLES 3 E	//	.02	.02	.02	.01	.01				.01															.04
WILLISTON WB CITY					.01																			.02	.03
-14th-																									
BISMARCK WB AIRPORT																									.01
BOWMAN COURT HOUSE	//		.01	.01																					.01
DEVILS LAKE WB CITY					.01	.02	.02	.02															.01	.01	.03
DICKINSON CAA		.05	.03	.03	.01																				.08
GARRISON		.03	.03	.07	.02	.02		.01		.03	.02	.02	.01	.01	.01	.01	.01		.01	.01					.13
GLEN ULLIN																									.33
GOLVA	//	.01	.03	.01		.01			.01																.02
GRAND FORKS CAA	//																						.01	.01	.10
GRANO	//	.01	.02	.02	.01	.01	.01	.01	.02	.01		.01	.01					.01	.02	.01	.04	.02	.02	.01	.03
HURDSFIELD			.01	.01	.04				.01			.01													.27
JAMESTOWN CAA	//																								.09
MC GREGOR RR STATION			.02		.01	.01			.01	.01				.01				.01	.01	.01	.01	.01	.01	.01	.01
MINOT CAA	//	.01	.02	.02	.03	.02	.02	.03	.01	.02	.01		.01	.01	.01	.01	.01	.01	.02	.01	.02	.03	.01	.02	.37
MOTT RR STATION																									.02
OMEMEE 3 SE					.01	.02	.01	.01		.01	.01										.01		.01	.01	.11
PEMBINA CAA	//											.01	.01	.02	.01										.05
RIVERDALE		.03	.05	.04	.01			.01	.01				.01	.01	.02	.01		.01							.18
SARLES 3 E	//					.01	.02	.02	.02	.02	.03	.02	.02	.01				.01	.01	.01	.01	.01	.03	.02	.26
WILLISTON WB CITY		.04	.01	.02	.02	.01	.02	.01	.03	.01								.01	.03	.01	.01			.01	.27
-15th-																									
BISMARCK WB AIRPORT						.01			.01	.02		.01													.05
BOWMAN COURT HOUSE	//	.06	.07	.03	.01						.05	.04	.02		.01										.17
DAWSON				.01	.02																				.16
DEVILS LAKE WB CITY			.01			.01																			.15
DICKINSON CAA		.01	.03	.05	.11	.04																.01	.01	.02	.28
EDGELEY EXP FARM								.04	.01																.08
FARGO WB AIRPORT	//																								.11
GARRISON		.01	.01	.01	.02	.07	.08	.07	.06	.02	.01	.01	.02	.02	.02	.01	.01	.01							.43
GLEN ULLIN		.04	.04	.01	.04	.08	.02	.02		.01				.01		.01									.26
GOLVA	//								.01	.01															.02
GRAND FORKS CAA	//											.01	.01	.01	.02			.01	.01	.01					.07
GRANO	//	.02	.02	.01	.01	.01	.05		.01	.12	.01	.01		.01	.01	.01	.01		.02		.02		.01	.01	.34
HAZELTON RR STATION	//							.01	.01	.02	.04	.01		.01	.01		.01								.11
HURDSFIELD								.01	.01	.03	.02	.07	.02												.16
JAMESTOWN CAA	//		.01		.01				.01	.01			.02				.01								.07
MANDAN EXP STATION									.01	.01	.01					.01									.04
MC GREGOR RR STATION		.01	.01	.01	.02	.02	.01	.04	.04	.01	.01	.01	.01	.01	.01	.02	.01				.01	.01	.02	.02	.30
MINOT CAA	//	.01	.01	.01	.01	.04	.04	.02	.01	.07	.01		.03	.01											.26
MOTT RR STATION				.01	.03	.02	.01																		.08
OAKES WATER WORKS									.02																.03
OMEMEE 3 SE		.01	.01	.01	.01	.01	.02	.03	.06	.04	.03	.01	.02	.02	.02	.01	.02	.01	.02	.01		.01			.36
PEMBINA CAA	//		.01	.01	.01	.01		.05	.02	.01	.01	.02		.02	.03			.01	.02	.02					.24
RIVERDALE		.01	.01	.03	.03	.03	.04	.04	.01	.01															.21
SARLES 3 E	//	.02	.01	.02	.01		.01	.07	.05	.07	.07	.06	.06	.04	.02		.01	.02	.01	.01		.01			.59
WAPPETON POWER PLANT									.01		.02	.01	.01	.01											.06
WILLISTON WB CITY			.02		.01	.02	.01	.01	.02	.03	.02	.01	.01		.01				.01	.01					.19
-16th-																									
DEVILS LAKE WB CITY			.01										.01												.02
DICKINSON CAA		.01	.07	.03		.01																			.12
GARRISON			.01	.01	.01	.02	.01		.01																.07
GRAND FORKS CAA	//																								.02
GRANO	//	.03	.04	.01	*	*	*	*	*	*	*	.10													.18
HANNAFORD		*	*	*	*	*	*	*	*	*	*	.20													.20
HAZELTON RR STATION	//		.01	.01																					.03
HURDSFIELD				.01	.01				.02																

Station	A. M. Hour ending												P. M. Hour ending												Total
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
HURDSFIELD									.01	.01		.01	.01												.04
JAMESTOWN CAA	//														.01										.01
MANDAN EXP STATION								.01	.01	.02	.01	.01				.01									.07
MC GREGOR RR STATION				.02	.01	.05	.04	.01																	.13
MINOT CAA	//	.01	.01																						.02
MOTT RR STATION																								.01	.01
OAKES WATER WORKS														.01	.01	.01									.03
OMEMEE 3 SE								.02	.01	.03															.06
RIVERDALE								.02	.01																.03
SARLES 3 E	//												*	*	*	*	*	*	*	*	*	*	*	*	
WAHPETON POWER PLANT												.01	.01	.01		*	*	*		*	*	*	*	*	.04
WILLISTON WB CITY																		.01						.01	.01
-20th-																									
BISMARCK WB AIRPORT			.01	.03	.02	.02																			.08
BOWMAN COURT HOUSE	//		.03					.02	.02	.01	.03	.01	.01		.01	.01									.15
DAWSON								.01	.01																.03
DEVILS LAKE WB CITY						.01	.03	.04	.01		.04	.01	.01								.02	.02	.01		.19
DICKINSON CAA		.02	.01	.02	.01	.02	.02	.01																	.11
FARGO WB AIRPORT	//						.02	.03	.02																.07
GARRISON		.01	.01	.02	.03	.03	.02																		.12
GLEN ULLIN			.01	.01	.01	.02	.02	.01																	.08
GOLVA	//	.03	.01		.01	.02	.01	.01	.01	.01									.01	.02	.02	.03			.20
GRAND FORKS CAA	//	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
GRAND	//		.02	.01	.02	.05			.03						.01	.01		.01		.01					.22
HANNAFORD			.01								.01	.01	.01						.03	.01	.01	.01			.02
HAZELTON RR STATION	//		.01	.01																					.04
HURDSFIELD				.01									.01	.01					.01						.06
JAMESTOWN CAA	//		.01																	.01			.01	.02	.04
MANDAN EXP STATION			.01	.01	.01			.02																	.06
MC GREGOR RR STATION		.01	.03	.02	.01	.01		.02																	.07
MINOT CAA	//																	.01	.01		.01	.01			.10
MOTT RR STATION		.01	.01			.03	.01	.01	.02			.01						.01	.01		.01	.01			.05
OAKES WATER WORKS		.01	.01	.01																					.18
OMEMEE 3 SE																		.02	.02	.06	.03	.02	.02	.01	.13
PEMBINA CAA	//					.02			.01									.01	.01		.01				.18
RIVERDALE			.01	.01	.01	.01	.02											.01	.01		.01				.07
WAHPETON POWER PLANT			.01	.01	.01	.02				.01	.01	.01													.06
WILLISTON WB CITY		.01	.02	.02																			.01		.06
-21st-																									
BISMARCK WB AIRPORT													.01												.01
FARGO WB AIRPORT	//			.01	.01																				.02
GRAND FORKS CAA	//	*	*	*	*	*	*	*	*	*	*	*			.33										.33
GRAND	//	.01	.01	.01																					.03
JAMESTOWN CAA	//	.01																							.01
MC GREGOR RR STATION				.01	.01		.01		.02																.05
PEMBINA CAA	//	.02																							.02
RIVERDALE			.01	.01	.01	.01																			.04
SARLES 3 E	//	*	*	*	*	*	*	*	*		.49														.49
WILLISTON WB CITY			.01	.01																					.02
-25th-																									
GRAND FORKS CAA	//												*	*	*	*	*	*	*	*	*	*	*	*	.03
GRAND	//												*	*	*	.03	.01	.01	.01	.01	.01	*	*	*	.07
HANNAFORD													*	*	*	*	*	*	*	*	*	*	*	*	.03
HAZELTON RR STATION	//						.01	.01																	.02
MANDAN EXP STATION													.01												.01
MC GREGOR RR STATION													*	*	*	*	*	*	*	*	*	*	*	*	.05
MINOT CAA	//																.01	.01		*	*	*	*	*	.02
OAKES WATER WORKS										.04															.04
PEMBINA CAA	//																.02				.01	.01	.01		.05
SARLES 3 E	//												.01												.01

See reference notes following Station Index.

CORRECTIONS - NORTH DAKOTA

Table 2 MONTH: August 1948
Towner, mean temperature 67.8°; departure 1.6;
lowest temperature 52°.

MONTH: November 1948

Table 2	Fargo WB Airport - Total precipitation 0.87; departure -0.03.
Table 3	Fargo WB Airport, amount on 23rd should be .08; 24th .08; 25th .05; total 0.87.

HOURLY PRECIPITATION

NORTH DAKOTA
DECEMBER 1948

Table 4-Continued

Station	A. M. Hour ending												P. M. Hour ending												Total
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
DELAYED DATA																									
AUGUST 1948																									
SEARING	-	-	-	-	-	-	-	-	-	-	-	-	1st	-	-	-	-	-	-	-	-	-	-	-	-
OMEMEE 3 SE RAUB	-	-	-	-	-	-	-	-	-	-	-	-	5th	-	-	-	.05	.02	.01	.01	.04	.09	.08	.23	.07
GOLVA OMEMEE 3 SE	.04	.05	.05	.16	.26	.15	.17	.26	.10	-	-	-	6th	-	-	-	-	-	-	-	.05	.17	.22	1.24	
GOLVA	.02	-	-	-	-	-	-	-	-	-	-	-	7th	-	-	-	-	-	-	-	-	-	-	.02	
GOLVA	-	-	-	-	-	-	-	-	-	.22	.16	-	8th	.02	.05	-	-	.03	-	-	-	.69	1.17		
GOLVA OMEMEE 3 SE RAUB	.06	.02	-	-	-	-	-	-	-	.10	.26	.09	9th	-	.03	-	.02	.05	.15	.09	.01	.08	.80	.65	
RAUB	-	-	.06	.13	.01	.25	.07	.04	.04	.02	.03	-	11th	-	-	-	-	-	.04	.11	.03	.18			
OMEMEE 3 SE	.11	.06	.01	-	-	-	-	-	-	-	-	-	13th	-	-	-	.97	-	-	-	-	1.15			
SEARING	-	-	-	-	-	-	-	-	-	-	-	-	15th	-	-	-	-	-	-	-	-	-	-	-	
OMEMEE 3 SE RAUB	-	-	-	-	-	-	-	-	-	-	-	-	19th	-	-	-	-	-	-	-	.11	.06	.01	.07	
RAUB	.01	.01	.01	-	-	-	-	-	-	-	-	-	20th	-	-	-	-	-	-	-	-	-	-	.03	
SEARING	-	-	-	-	-	-	-	-	-	-	-	-	23rd	-	-	-	-	-	-	-	-	-	-	-	
RAUB	-	-	-	-	-	-	-	-	-	-	-	-	27th	-	-	-	-	.11	-	-	-	-	-	.11	
OMEMEE 3 SE	-	-	-	-	-	-	-	-	-	-	-	-	29th	-	-	-	-	-	-	-	-	-	-	-	
SEARING	-	-	-	-	-	-	-	-	-	-	-	-	30th	-	-	-	-	-	-	-	-	-	-	-	
SEPTEMBER 1948																									
ASHLEY	-	-	-	-	-	-	-	-	-	-	-	-	4th	-	-	-	-	-	-	-	-	-	-	-	
RAUB	-	-	-	-	-	-	-	-	-	-	-	-	6th	-	-	-	-	-	-	-	-	-	-	-	
OMEMEE 3 SE	-	-	-	-	-	-	-	-	-	-	-	-	7th	-	-	-	-	-	-	-	-	-	-	-	
MC GREGOR RR STATION	-	-	-	-	-	-	-	-	-	-	-	-	17th	-	-	-	-	-	-	-	-	-	-	.06	
MC GREGOR RR STATION	-	-	-	-	-	-	-	-	-	-	-	-	18th	-	-	-	-	-	-	-	-	-	-	-	
ASHLEY	-	-	-	-	-	-	-	-	-	-	-	-	20th	.28	.14	.02	-	-	-	-	-	-	-	-	
MC GREGOR RR STATION	-	-	-	-	-	-	-	-	-	-	-	-	24th	.02	.01	.01	.01	.01	-	-	-	-	-	.06	
RAUB	-	-	-	-	-	-	-	-	-	-	-	-	26th	-	-	-	-	-	-	-	-	-	-	-	
OCTOBER 1948																									
SARLES 3 E	-	-	-	-	.02	.10	.14	.18	.20	.20	.10	.09	6th	.06	.04	.01	.12	.02	.01	.03	.01	1.33			
SARLES 3 E	-	-	-	-	-	-	-	-	-	-	-	-	16th	-	-	-	-	-	-	-	.02	.02			
SARLES 3 E	-	-	-	-	-	-	-	-	-	-	-	-	29th	-	.04	.01	.01	-	-	-	-	.06			
SARLES 3 E	.01	.02	.04	.03	.03	-	-	-	-	-	-	-	30th	-	.02	.01	-	-	-	-	-	.16			

See reference notes following Station Index.

DAILY TEMPERATURES

NORTH DAKOTA
DECEMBER 1948

Table 5

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
ALMONT 7 SW	MAX	44	57	51	33	22	14	19	16	13	18	36	17	15	11	9	8	16	14	30	37	32	19	18	17	17	29	33	25	26	32	29	24.4
	MIN	24	23	29	21	7	5	-02	0	-15	-10	9	-02	7	6	-06	-08	-02	-05	5	20	10	-06	-02	6	11	5	15	7	2	17	8	5.7
AMIDON	MAX	41	57	53	43	23	14	22	20	12	29	31	27	24	20	8	9	23	12	30	36	29	19	25	18	19	32	30	25	25	29	25	26.1
	MIN	23	20	30	19	2	-03	-04	-04	-17	2	12	1	10	4	-04	-09	-04	-05	2	16	16	-04	-03	1	0	2	12	2	-03	4	-02	3.6
ARVILLA STATE PARK	MAX	32	40	35	28	28	22	19	15	5	8	26	16	2	8	16	15	8	9	31	32	28	9	4	7	11	19	30	15	19	28	23	19.0
	MIN	12	6	23	22	15	13	15	1	-16	-28	5	-16	-16	-16	8	-04	-15	-15	-01	21	-04	-07	-16	-15	-28	3	-02	-04	1	3	-03	-01.8
ASHLEY	MAX	35	43	51	51		31	16	16	14	7	21	39	18	13	14	14	24	15	22	31	40	23	12	27	25		31	35	20	28	31	25.8
	MIN	14	21	21	20		14	2	-10	-12	-15	4	-04	6	6	8	-04	-11	-09	-10	-06	6	-04	-07	-12	0		0	4	-07	-06	-04	-00.2
BALDHILL DAM	MAX	34	38	50			18	18	14	-02						8	14	16	11		31	40	9				24	35	20	24	28		
	MIN	8	5	21			8	8	0	-12	-21					-01	0	-05	-12			-03	-08					-02	-06	-05	-03		
BEACH	MAX	41	53	52	36	18	10	20	18	8	26	34	28	27	11	9	9	22	15	30	39	30	20	16	22	19	22	36	24	26	30	25	25.0
	MIN	26	23	25	16	4	-04	-10	4	-23	2	12	-04	8	6	-06	-07	-06	-11	4	18	15	-08	-11	-09	8	7	12	0	0	16	3	3.2
BELCOURT INDIAN RES	MAX	29	39	36	25	21	20	16	12	5	3	15	6	11	5	4	10	3	4	31	28	9	4	5	5	13	14	21	25	19	28	22	15.7
	MIN	-04	16	23	12	10	5	8	-10	-32	-32	2	-05	-02	1	2	2	-17	-13	-03	8	-14	-14	-20	-15	-08	-02	-06	0	-08	2	-02	-03.7
BELFIELD	MAX	42	55	47	31	22	12	23	19	8	10	26	33	24	18	10	16	22	18	33	39	24	16	24	22	20	34	36	18	25	30	29	25.4
	MIN	24	23	25	20	5	2	-07	-03	-18	-15	-01	-09	-06	5	2	-04	-06	-15	4	17	12	-06	-12	4	7	4	8	4	-12	8	3	1.9
BISBEE	MAX	27	32	37	24	22	18	17	16	10	1	13	13	4	4	5	11	8	9	32	30	6	4	0	8	12	31	14	14	12	19	16	15.1
	MIN	6	10	10	18	10	10	9	4	-22	-09	0	-17	-05	-07	-08	-06	-20	-14	-03	5	-07	-07	-21	-10	-09	5	-02	-04	-11	-10	-04	-03.4
BISMARCK WB CITY	MAX	42	58	48	27	20	16	18	15	10	21	40	23	12	10	11	14	15	25	30	37	20	11	10	19	20	30	32	20	27	32	23.8	
	MIN	19	24	25	25	12	5	6	-05	-13	-13	-01	-04	7	7	-04	-08	-15	-15	3	20	-06	-11	-19	-12	-06	-06	-10	-12	-06	-04	-00.6	
BISMARCK WB AIRPORT	MAX	46	57	49	28	20	17	19	15	4	16	39	16	12	12	10	11	15	16	32	39	20	9	11	16	19	29	32	21	27	32	28	23.1
	MIN	20	20	22	20	11	6	-02	-06	-15	-11	0	-08	8	7	-03	-08	-16	-17	6	13	-06	-12	-20	-13	5	-06	-06	-03	-12	6	-09	-00.8
BOTTINEAU	MAX	32	39	38	32	18	15	18	10	5	1	17	1	8	10	9	8	-02	4	29	28	22	2	5	7	10	15	14	26	24	25	22	15.9
	MIN	13	4	19	13	9	8	-04	-01	-28	-30	-08	-17	-02	1	3	-03	-23	-25	-15	20	-06	-09	-25	-21	-05	-04	-07	-05	-10	-05	-05	-05.3
BOTTINEAU STATE PARK	MAX	33	35	45	30	30	20	15	10	9	10	8	7	10	9	10	9	11	10	31	30	20	6	11	5	9	19	20	17	20	21	24	17.5
	MIN	15	19	26	16	9	4	4	2	-27	-35	0	5	0	-01	-01	0	-14	-10	4	16	-04	-10	-21	-20	0	5	0	2	4	10	4	0.0
BOWBELLS R R STATION	MAX	32	38	44	32	23	12	9	12	12	-04	11	16	3	5	5	5	3	3	25	32	32	8	2	13	14	19	23	23	11	29	26	16.7
	MIN	4	12	17	21	8	0	-05	-06	-24	-24	-04	-11	-12	0	0	-02	-12	-15	-15	19	-02	-08	-13	-13	-16	4	8	1	0	0	6	-02.5
BOWMAN COURT HOUSE	MAX	34	39	46	45	22	13	25	19	14	22	36	27	26	16	9	10	11	11	29	38	29	19	11	18	18	24	37	25	25	22	20	23.9
	MIN	25	24	29	14	10	-04	5	-04	-10	8	27	10	8	1	-02	-01	-08	3	15	17	-08	-04	1	9	5	8	4	4	-05	11	3	5.7
CARRINGTON	MAX	34	38	42	42	17	17	15	21	13	4	15	36	9	8	12	13	8	9	12	31	36	8	-11	12	5	21	29	18	15	27	33	19.0
	MIN	3	17	23	23	3	8	5	8	-15	-18	-06	-12	2	0	5	6	-07	-09	-03	13	-02	-08	12	-11	-11	11	2	0	1	0	2	1.4
CARSON 2 S W	MAX	44	47	58	44	24	17	22	16	11	20	38	25	17	11	11	11	20	17	32	38	29	20	10	27	30	34	28	20	28	30	30	25.8
	MIN	21	19	26	22	7	4	-04	0	-17	-07	8	-02	9	7	-02	-07	-06	-07	-05	25	9	-09	0	3	8	4	10	4	-04	15	3	4.2
CAVALIER POWER PLANT	MAX	28	39	35	32	24	26	20	16	7	6	12	5	5	12	16	14	12	9	30	29	25	8	12	4	-03	21	22	18	27	33	21	18.2
	MIN	6	10	28	21	14	16	11	2	-12	-27	-07	-06	-11	-11	7	6	-11	-17	5	10	-03	0	-21	-14	-27	-03	-02	-06	0	3	0	-01.2
CENTER	MAX	34	56	46	30	23	13	15	15	14	13	38	20	10	9	6	7	10	11	30	36	32	6	10	15	16	28	34	22	24	30	26	21.9
	MIN	24	20	22	22	9	3	0	-10	-16	-11	-09	-14	-11	-11	-03	-06	-16	-20	-02	28	-05	-16	-21	-11	-11	-03	3	8	-18	10	-06	-02.3
COOPERSTOWN	MAX	32	42	36	29	26	18	20	18	5	6	33	32	6	8	17	9	9	14	32	35	31	5	9	3	13	22	28	20	23	28	23	20.4
	MIN	11	12	22	23	11	11	13	-01	-19	-20	3	-09	-03	-03	2	-05	-12	-13	-04	22	-04	-07	-16	-13	-19	1	-01	1	-08	9	-05	-00.6
CROSBY	MAX	29	35	41	32	24	9	5	8	10	4	12	14	7	3	2	5	3	-03	25	30	29	6	0	-05	5	19	18	15	28	22	14.4	
	MIN	12	21	25	22	4	-01	-07	-11	-24	-24	-08	-17	-15	0	-01	-02	-18	-19	-19	16	3	-10	-14	-14	-							

DAILY TEMPERATURES

NORTH DAKOTA

DECEMBER 1948

ble 5-Continued

Station		Day of month																															Average	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
LAFTON STATE SCHOOL	MAX	29	40	39	33	28	23	21	18	10	7	19	12	4	18	20	15	9	9	30	30	29	8	3	8	0		19	17	13	28	24	18.8	
	MIN	9	10	26	23	14	15	16	8	-14	-27	5	-09	-08	-14	6	-04	-13	-16	-06	20	-02	-04	-18	-15	-30		-04	-06	-09	0	6	-01.4	
LAND FORKS CAA	MAX	32	39	40	31	28	22	20	13	5	11	26	5	3	14	22	11	7	7	29	30	20	8	2	-01	7	17	21	14	14	23	15	17.3	
	MIN	14	12	21	21	13	17	4	-08	-23	-21	5	-09	-15	-06	-01	-02	-13	-15	-02	19	-03	-15	-18	-24	-28	1	-02	-04	-05	5	-05	-02.2	
LAND FORKS UNIVERSITY	MAX	32	38	38	31	27	23	21	15	5	12	26	7	4	14	23	13	7	7	30	31	20	9	3	-03	6	18	20	14	14	24	20	17.7	
	MIN	14	13	23	22	16	16	5	-06	-23	-23	6	-08	-13	-07	1	-03	-12	-15	15	20	-04	-14	-18	-13	-25	4	1	-02	-04	2	-04	-01.1	
LANVILLE	MAX	40	46	40	30	20	15	12	10	9	6	16	7	7	6	8	7	6	10	31	34	25	6	3	2	16	24	26	15	20	30	25	17.8	
	MIN	13	26	18	10	5	5	4	-20	-21	2	-06	1	0	-02	-02	-15	-15	-01	20	-03	-12	-15	-18	-03	-02	2	-01	-06	10	0	-00.8		
LENORA	MAX	40	41	43	32	30	12	8	4	2	17	15	13	12	12	7	6	5	0	30	26	27	6	10	5	24	20	20	13	23	27	24	17.9	
	MIN	20	25	30	28		-08	-03	2	-20	-15	-02	2	-02	0	3	-04	-25	-17	-02	20	2	-16	-16	-18	2	0	-02	-07	-05	8	10	-00.3	
LINCOLN RR STATION	MAX	55	40	50	47	31	22	23	23	20	8	17	35	15	15	22	24	16	20	22	31	41	15	24	16	13	15	30	34	13	29	28	25.6	
	MIN	15	25	25	20	20	11	4	3	-15	-05	0	-01	6	8	0	0	-02	-04	-05	18	9	4	-06	-03	-12	-15	-10	1	-03	0	8	4.0	
LINNAH	MAX	26	35	33	26	17	18	17	10	-15	2	15	1	1	-03					12	28	25	15	14	-04	-02	9	17	14	13	8	27	21	13.1
	MIN	-07	8	24	16	8	10	8	-05	-24	-31	-11	-18	-12	-14					-22	12	15	-05	-12	-25	-21	-24	-09	-09	-03	-10	3	-07	-05.7
LINDSBORO	MAX	32	38	33	27	16	16	17	12	6	1	16	5	3	2	5	8	2	13	30	29	14	6	3	3	12	18	17	14	15	24		14.6	
	MIN	3	14	21	13	8	10	5	-08	-22	-31	0	-18	-14	-14	-01	0	-17	-19	-01	12	-08	-11	-21	-18	-20	1	-03	-01	-08	-05		-05.1	
LITTINGER	MAX	42	58	58	39	24	20	24	20	20	29	38	33	24	20	11	24	17		36	38	31	24	25	22	21	33	39	33	31	29	30	29.8	
	MIN	15	19	19	22	8	5	0	-01	-14	0	12	0	14	10	0	-13	-03		11	16	14	15	-05	8	9	3	5	8	-09	12	1	6.0	
LILLSBORO	MAX	34	40	39	32	30	30	22	16	5	8	28	11	6	14	22	15	9	12	30	33	33	11	7	1	5	23	20	11	12	23	20	19.4	
	MIN	15	12	23	23	15	14	16	2	-16	-21	8	-07	-03	-05	13	-03	-10	-14	-01	21	3	0	-01	-16	-12	-25	2	-01	1	3	2	-02	1.0
LAMESTOWN CAA	MAX	41	50	46	28	17	17	19	16	8	7	38	9	10	13	16	13	17	19	32	39	16	9	20	9	22	30	32	19	29	32	32	22.7	
	MIN	21	20	22	19	11	8	10	2	-16	-14	-01	-07	4	3	-03	-02	-09	-10	6	16	1	-08	-10	-06	-04	2	4	3	-01	12	-01	2.2	
LAMESTOWN STATE HOSP	MAX	40	50	44	32	28	17	18	14	8	8	38	24	9	10	15	12	17	18	32	39	33	7	20	10	21	29	32	18	28	32	30	23.6	
	MIN	20	19	23	12	14	7	11	6	-12	-15	-01	-05	5	3	3	-03	-10	-10	1	23	2	-06	-08	-04	-04	2	8	5	-02	11	-02	2.9	
LENMARE	MAX	31	39	43	33	22	12	10	15	12	-03	12	12	2	6	3	5	6	2	27	31	33	11	8	14	15	19	22	30	20	29	26	18.2	
	MIN	15	23	27	20	8	3	-02	-05	-22	-23	-04	-13	-08	-01	-01	-01	-07	-08	-09	19	-03	-12	-13	-12	-12	7	11	4	3	2	8	-00.2	
LENSAL WILDLIFE REFUGE	MAX	39	48	41	32	24	13	16	14	-01	6	38	23	7	6	8	8	13	17	33	33	31	5	13	3	22	18	29	17	16	35	26	20.4	
	MIN	15	14	19	21	11	8	9	-01	-16	-21	0	-12	1	1	4	-06	-13	-17	-02	22	-02	-16	-16	-12	-07	0	2	-01	-03	6	-06	-00.5	
LEA MOURE	MAX	40	52	50	35	29	20	21	18	9	12	37	29	11	14	19	15	27	26	32	42	36	11	30	22	22	33	39	21	34	32	32	27.4	
	MIN	18	16	32	20	15	8	9	4	-10	-10	0	-05	5	4	5	2	-09	-09	0	22	4	-04	6	-06	-10	0	0	3	1	7	-02	3.6	
LENGDON EXP FARM	MAX	24	35	34	27	20	18	20	11	-01	-02	15	10	7	1	13	10	0	0	28	27	20	6	4	-02	8	16	12	20	12	28	32	14.6	
	MIN	12	8	25	20	9	10	11	-03	-25	-32	-02	-16	-11	-16	0	-02	-18	-20	10	18	-08	-08	-23	-20	-22	-02	-06	-05	-07	8	-06	-04.5	
LEARMORE	MAX	30	40	37	28	26	20	20	15	5	7	24	14	2	9	10	12	8	9	30	30	27	10	8	8	9	20	22	17	19	27	22	17.6	
	MIN	13	9	25	23	13	13	14	-02	-20	-25	5	-08	-10	-10	-05	-05	-09	-07	28	24	-02	-07	-12	-13	-23	8	3	4	1	6	3	1.0	
LEEDS	MAX	33	40	39	29	19	18	18	15	7	7	20	11	4	5	11	10	1	4	31	33	22	3	5	3	12	18	20	19	30	23	17.1		
	MIN	18	19	28	19	12	11	11	-06	-19	-24	4	-14	-02	-05	5	-07	-14	-17	-03	21	-06	-10	-15	-13	-07	6	2	-01	-05	10	-02	-00.0	
LEINTON	MAX	43	56	54	35	25	19	18	19	9	15	44	33	18	16	13	10	23	18	33	42	35	22	26	27	22	32	38	20	28	32	32	27.6	
	MIN	20	15	22	24	12	5	4	-07	-13	-17	0	-05	5	10	3	-04	-13	-15	-09	20	10	-08	-16	7	8	-08	-06	-01	-13	8	-10	0.8	
LEISBON	MAX	36	46	47	32	30	22	21	22	9	12	36	32	16	16	20	16	23	23	32	43	35	18	26	11	22	29	35	19	33	28	32	26.5	
	MIN	21	16	21	21	15	10	12	0	-05	-16	1	-04	5	-04	7	4	-07	-12	0	22	2	-02	-09	-04	-13	3	6						

DAILY TEMPERATURES

NORTH DAKOTA
DECEMBER 1948

Table 5--Continued

Station		Day of month																															Average
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
NEW SALEM	MAX	42	56	46	33	21	17	18	15	10	17	39	17	15	10	10	10	15	13	30	37	20	11	10	17	13	22	31	24	25	31	25	22.6
	MIN	20	21	20	15	7	2	-01	-04	-16	-14	7	-07	-04	-03	-07	-05	-06	-08	10	16	-04	-09	-05	-04	7	4	15	12	15	10	10	2.9
OAKES WATER WORKS	MAX	35	39	48	50	29	19	20	20	18	5	14	36	15	13	19	19	16	23	26	31	44	16	16	28	14	23	31	39	21	25	30	25.2
	MIN	13	15	18	20	16	9	9	9	-04	-12	3	-01	3	5	5	-01	-08	-07	-05	15	7	0	-06	-07	-09	-07	3	3	4	3	1	2.9
PARK RIVER	MAX	30	39	39	31	25	21	19	15	7	3	13	5	3	4	14	14	8	10	30	29	27	7	5	3	6	20	17	20	18	30	21	17.2
	MIN	10	12	26	24	15	15	15	7	-15	-22	3	-09	-06	-09	4	-03	-10	-16	1	21	0	-04	-14	-07	-24	5	4	1	4	5	2	1.0
PARSHALL	MAX	40	53	43	32	20	9	15	12	12	14	29	12	11	8	9	4	0	4	30	32	22	0	-01	4	19	20	25	22	20	29	25	18.5
	MIN	24	22	28	18	5	5	-05	-02	-20	-15	-02	-15	-15	2	-01	-07	-24	-25	-03	20	-09	-15	-23	-25	4	-05	-05	-05	-18	12	-07	-03.3
PEMBINA CAA	MAX	28	37	35	27	28	24	20	12	4	7	17	4	0	12	22	9	0	2	26	25	10	2	-03	-07	8	16	10	12	10	25	17	14.2
	MIN	12	11	25	25	16	18	12	-01	-23	-25	2	-08	-09	-09	8	-01	-19	-21	0	10	-02	-05	-20	-26	-28	1	-05	-06	-12	5	-07	-02.5
PETERSBURG	MAX	29	38	36	28	23	17	22	12	3	4	26	15	0	7	15	10	4	4	20	24	24	4	2	0	14	17	18	29	13	23	20	16.2
	MIN	16	16	16	22	10	10	12	-03	-22	-25	3	-12	-10	-10	4	-10	-14	-15	-07	12	-04	-03	-18	-14	-18	2	0	-01	8	10	-05	-01.5
PETTIBONE	MAX	40	49	50	41	24	14	16	16	5	6	37	22	10	12	11	10	10	9	32	37	33	10	12	12	2	24	27	20	23	31	30	21.8
	MIN	19	19	24	24	11	5	6	5	-13	-20	0	-11	3	4	0	-04	-14	-15	-04	20	2	-13	-18	-04	-01	-03	0	-01	-10	9	-08	0.2
PORTAL	MAX	30	34	41	31	22	10	7	8	10	-05	11	12	0	3	1	3	1	-05	26	30	19	7	-01	4	15	18	17	18	5	27	22	13.6
	MIN	16	19	28	22	8	0	-10	-11	-28	-28	-05	-16	-11	-11	-01	-01	-14	-15	-13	19	-03	-12	-13	-18	-17	2	4	-05	-05	2	4	-03.6
POWERS LAKE	MAX	28	43	35	29	15	10	10	14	10	12	10	10	6	2	10	10	-02	4	30	28	24	6	-06	0	5	22	20	20	20	22	24	15.2
	MIN	20	19	19	15	5	-05	-08	-07	-25	-18	-14	-02	-02	-02	-03	-04	-16	-19	-04	20	-10	15	-19	-18	-10	0	10	-04	-12	-04	-02	-02.6
RICHARDTON ABBEY	MAX	43	57	49	38	23	14	21	16	16	24	36	25	16	12	5	9	16	15	30	46	32	19	22	19	18	29	28	33	30	32	30	25.9
	MIN	25	21	29	21	6	2	-02	2	-16	-07	9	-01	10	4	-02	-09	-02	-04	7	21	13	-03	-01	3	3	9	8	10	-02	18	3	5.5
RIVERDALE	MAX	43	55	46	34	13	16	19	14	13	13	38	18	13	8	6	6	7	9	31	35	30	8	8			29	23	22	32	26	22.0	
	MIN	23	24	27	18	1	1	9	-01	-19	-14	2	11	6	3	-02	-06	-09	-14	3	28	5	-11	-11			-08	4	-06	17	3	3.0	
ROLLA	MAX	29	36	33	25	13	15	15	12	5	1	14	4	4	2	3	10	2	8	32	28	6	4	4	6	12	34	20	19	20	37	21	15.3
	MIN	5	18	23	13	9	10	10	-02	-26	-29	2	-12	-06	-04	0	1	-15	-13	-03	7	-07	-06	-15	-09	-10	4	0	3	-08	4	3	-01.7
RUGBY 1 N	MAX	30	39	35	31	19	15	18	15	0	10	22	15	4	5	8	10	-01	-01	29	32	31	1	4	2	15	16	15	13	15	28	19	15.9
	MIN	15	14	27	18	12	9	8	-10	-23	-24	4	-17	-03	-01	3	-05	-17	-23	-11	23	-10	-13	-22	-18	-09	-01	-04	-09	-12	8	-06	-03.0
SANISH	MAX	37	41	52	37	31	15	14	15	13	3	17	25	13	13	7	5	5	1	27	38	36	12	0	-02	15	20	24	21	19	31	30	19.8
	MIN	11	21	24	9	9	2	0	-05	-17	-20	0	-14	-11	5	2	-05	-22	-24	-24	12	8	-17	-23	-25	-19	-05	-06	-08	-19	-18	-02	-05.7
SHARON	MAX	34	41	36	27	25	19	20	20	-01	5	30	28	10	7	20	10	8	8	31	33	30	3	2	5	12	20	24	18	18	25	24	19.1
	MIN	18	15	23	23	11	11	14	-01	-18	-22	5	-10	0	-04	7	-06	-12	-13	-02	27	-05	-10	-17	-07	-16	-02	3	2	-06	11	-02	0.4
STANLEY	MAX	36	46	35	25	15	7	10	11	5	13	22	8	6	4	3	2	0	1	29	29	11	-02	4	-02	17	20	20	16	29	27	23	15.2
	MIN	19	17	22	11	2	-03	-06	-08	-24	-19	-09	-18	-01	-04	-08	-14	-18	-19	-04	8	-05	-19	-15	-24	-10	3	0	0	-06	3	-01	-04.7
STEELE	MAX	43	51	49	30	24	16	16	10	13	39	15	11	11	10	10	12	10	31	39	32	12	5	4	4	20	25	18	21	31	28	21.2	
	MIN	20	19	23	23	12	3	5	-01	-15	-16	-02	-02	6	5	-02	-07	-14	-16	-04	19	-04	-06	-17	-15	0	3	-01	-11	11	-05	0.4	
TOWNER	MAX	35	42	38	29	16	17	12	-11	9	21	10	4	16	8	9	21	6	10	32	31	22	21	9	10	21	15	22	14	30	22	22	18.2
	MIN	15	11	24	14	7	2	-22	-22	-24	2	-16	0	-02	-04	0	-10	-18	-22	0	-06	2	-14	-19	-21	-04	-05	0	-10	10	5	11	-03.6
TURTLE LAKE	MAX	41	53	44	32	23	15	17	13	9	13	37	23	10	6	10	6	7	8	30	35	32	4	7	13	15	22	28	20	18	30	25	20.8
	MIN	22	23	25	22	12	2	3	-07	-20	-16	3	-12	4	4	0	-08	-15	-18	2	20	1	-16	-19	-18	0	-03	0	0	-11	14	-03	-00.2
UNDERWOOD 12 W	MAX	44	55	44	32	31	20	17	7	3	20	20	12	15	8	8	8	4	24	32	37	24	12	5	14	18	20	28	21	24	33	29	21.6
	MIN	22	20	21	29	15	10	2	-13	-08	-08	3	-09	7	-10	-10	-06	-21	-12	-01	8		-24	-25	-23	0	7	-04	-06	-16	-03	0	-01.7
UPHAM WILDLIFE REFUGE	MAX	36	41	38	31	19	16	18	10	-12	5	19	9	12	8	10	9	2	-08	30	33	24	4	-01	7	14	17	12	14	13	29	21	15.5
	MIN	8	10	24	18	12	9	8	-08	-25	-27	4	-19	-03	-01	4	-02	-26	-29	-14	14	-08	-11	-19	-26	-01	-03	-12	-06	-23	-01	-11	-05.3
VALLEY CITY	MAX	36	47	41	41	33	19	21	20	12	8	32	29	10	8	18	15	19	17	32	37	35	7	11	14	18	27	29	25	24	30	26	23.9
	MIN	19	16	26	25	14	6	13	8	-10	-14	-03	-06	0	1																		

STATION INDEX

NORTH DAKOTA
DECEMBER 1948

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT. O /	LONG. O /	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
ADAMS 7 S	0022	WALSH	RED	48 20	98 06		CST		7A				MYRA J BOTA	3
ALEXANDER RR STATION	0096	MC KENZIE	YELLOWSTONE	47 50	103 38	1200	MST		8A		8		ARTHUR J BAUMAN	3
ALMONT 7 W	0136	MORTON	HEART	46 43	101 39	2300	MST	7P	7P	6	6		HOGAN RAMSLAND	2 3 5
ALPHA 1 S	0149	GOLDEN VALLEY	LIT MISSOURI	46 37	103 49		MST		7P		23		H A BURY	3
AMIDON	0209	SLOPP	CANNONBALL	46 29	103 19	2908	MST	5P	5P	27	27		STANLEY W BALE	2 3 5
ARVILLA STATE PARK	0369	GRAND FORKS	RED	47 56	97 30	960	CST	6P	6P	5	5		ALBERT TROREN	2 3 5
ASHLEY	0382	MC INTOSH	MISSOURI	46 02	99 22	2025	CST	8A	8A	53	53		W E DREY	2 3 5
BALDILL DAM	0450	BARNES	SHEYENNE	47 02	98 05	1300	CST	8A	8A	1	1		F A JOHNSON	2 3 5
BALFOUR RR STATION	0492	MC HENRY	SOURIS	47 57	100 32		CST		MID		8		C G THOMSON	3 4
BELCOURT INDIAN RES	0626	ROLETTE	PEMBINA	48 50	99 45	1960	CST	7P	7P	4	4		TURTLE MT INDIAN AG	2 3 5
BELFIELD	0639	STARK	HEART	46 52	103 11	2592	MST	7P	7P	31	31		CARL INDERGAARD	2 3 5
BEULAH	0766	MERCER	KNIFE	47 16	101 47	1780	MST		7P		34		KNIFE RIVER COAL MNG	3
BISBEE	0796	TOWNER	DEVILS LAKE	48 37	99 22	1601	CST	6P	6P	46	46		ROBERT L PETERSON	2 3 5
BISMARCK WATER WORKS	0809	BURLEIGH	MISSOURI	46 49	100 49	1628	CST		7A				BISMARCK WATER PLANT	3
BISMARCK WB CITY	0814	BURLEIGH	MISSOURI	46 48	100 48	1670	CST	10A	10A	74	74		U S WEATHER BUREAU	2 3 5
BISMARCK WB AIRPORT	0819	BURLEIGH	MISSOURI	46 46	100 45	1650	CST	MID	MID	9	9		U S WEATHER BUREAU	2 3 4 5
BOTTINEAU	0941	BOTTINEAU	SOURIS	48 50	100 27	1638	CST	4P	4P	57	57		N D SCHOOL OF FRSTRY	2 3 5
BOTTINEAU STATE PARK	0946	BOTTINEAU	SOURIS	48 56	100 22	2160	CST	6P	6P	5	5		PARK SUPT	2 3 5
BOWBELLS RR STATION	0961	BURKE	SOURIS	48 48	102 15	1958	CST	8A	8A	23	23		CHARLES KAUFMAN	2 3 5
BOWMAN COURT ROUSE	0995	BOWMAN	GRAND	46 11	103 23	2872	MST	5P	5P	34	34		O B HOOK	2 3 4 5
BREIEN	1052	NORTON	CANNONBALL	46 23	100 57	1719	CST		8A				MELVIN NELSON	2 3
BUTTE	1225	MC LEAN	SOURIS	47 50	100 40	1740	CST	6P	6P	24	24		M O ANDERSON	2 3 5
CARRINGTON	1360	FOSTER	JAMES	47 27	99 08	1579	CST	7A	7A	51	51		SOO LINE AGENT	2 3 5
CARSON 2 SW	1370	GRANT	HEART	46 23	101 35	2500	MST	7P	7P	37	37		J W EVENS	2 3 5
CASSELTON	1400	CASS	RED	46 54	97 13	934	CST	5P	5P	53	53		WALLACE G SWEENEY	2 3 5
CAVALIER POWER PLANT	1435	PEMBINA	PEMBINA	48 48	97 38	894	CST	5P	5P	13	41		CITY LIGHT & POWER	2 3 5
CENTER	1456	OLIVER	MISSOURI	47 07	101 18	2100	MST	7P	7P	11	11		FRED L HEINZ	2 3 5
COGSWELL 6 W	1525	SARGENT	JAMES	46 07	97 55	1291	CST		7A		4		JORN WADDAHL	3
COLGATE	1686	STEELE	RED	47 14	97 39	1180	CST		6P		15		O M JENSEN	3
COOPERSTOWN	1766	GRIGGS	SREYENNE	47 26	98 07	1428	CST	5P	5P	52	52		R J LOCKNER	2 3 5
COURTENAY	1816	STUTSMAN	JAMES	47 13	98 34	1523	CST		6P		15		G R HANAWALT	3
CROSBY	1871	DIVIDE	SOURIS	48 54	103 18	1954	CST	7A	7A	42	42		VERNON V NICROLS	2 3 5
DAWSON	2018	KIDDER	MISSOURI	46 52	99 45	1730	CST		MID		8		LOUIS J BILLINGTON	3 4
DEVILS LAKE WB CITY	2158	RAMSEY	DEVILS LAKE	48 07	98 52	1471	CST	MID	MID	44	73		U S WEATHER BUREAU	2 3 4 5
DICKINSON CAA	2183	STARK	HEART	46 48	102 48	2587	MST	MID	MID	8	8		CAA	2 3 4 5
DICKINSON EXP STATION	2188	STARK	HEART	46 53	102 48	2460	MST	7A	7A	57	57		LEROY MOOMAW	2 3 5 6
DRAKE	2298	MC HENRY	SOURIS	47 55	100 22	1634	CST	7A	7A	19	19		GEORGE A PAULUS	2 3 5
DUNN CENTER	2365	DUNN	KNIFE	47 21	102 37	2191	MST	6A	6A	50	50		FRANK R SOMMARS	2 3 5
DUNSEITH ST SANITARIUM	2385	ROLETTE	SOURIS	48 50	100 02	2001	CST	5P	5P	53	53		STATE TUBERCULOSIS	2 3 5
ECKMAN	2472	BOTTINEAU	SOURIS	48 39	101 03	1500	CST	7A	7A	43	43		E R SREMAN	2 3 5
EDGELEY EXP FARM	2482	LA MOURE	JAMES	46 20	98 42	1568	CST	6P	6P	48	48		N D AGRI EXP	2 3 5
EDMORE 1 W	2525	RAMSEY	DEVILS LAKE	48 25	98 29	1524	CST	8P	8P	25	25		MIKE DAVIS	2 3 5
ELBOWOODS	2570	MC LEAN	MISSOURI	47 35	102 09	2082	CST	6P	6P	56	56		H W CASE	2 3 5
ELLEDALE NORMAL SCH	2605	DICKEY	JAMES	46 00	98 31	1457	CST	8P	8P	50	50		J E DEMMER	2 3 5
EPPING	2735	WILLIAMS	MISSOURI	48 18	103 21	2224	CST	6P	6P	40	40		T BEACHLER	2 3 5
FAIRFIELD 9 N	2809	BILLINGS	LIT MISSOURI	47 19	103 12	2650	MST		6P		21		MRS EDITH LARSON	3
FARGO WB AIRPORT	2859	CASS	RED	46 54	96 48	895	CST	MID	MID	68	68		U S WEATHER BUREAU	2 3 4 5
FESSENDEN	2949	WELLS	JAMES	47 39	99 37	1610	CST	6P	6P	37	37		JOHN V ZUBER	2 3 5
FORMAN	3117	SARGENT	RED	46 06	97 38	1249	CST	6P	6P	57	57		ART WATERMAN	2 3 5
FORT YATES	3207	SIOUX	MISSOURI	46 05	100 38	1670	MST	6P	6P	49	49		P J JACOBSON	2 3 5
FOXHOLM WILDLIFE REF	3217	WARD	SOURIS	48 27	101 33	1609	CST	5P	5P	24	28		U S WILDLIFE REF	2 3 5
FULLERTON	3287	DICKEY	JAMES	46 10	98 25	1439	CST	6P	6P	51	51		F O ALIN	2 3 5
GACKLE	3309	LOGAN	JAMES	46 38	99 08	1951	CST	6P	6P	18	18		DAVID R HAMM	2 3 5
GARRISON	3376	MC LEAN	MISSOURI	47 38	101 25	1911	CST	MID	MID	72	72		MAE N VORACREK	2 3 4 5
GLEN ULLIN	3496	MORTON	HEART	46 49	101 49	2090	MST		MID		8		NICK GAUER	3 4
GOLVA	3556	GOLDEN VALLEY	LIT MISSOURI	46 44	103 59	2781	MST	7P	6A	8	8		CHESTER K PUDA	2 3 5
GRAFTON STATE SCROOL	3594	WALSH	RED	48 25	97 26	827	CST	5P	5P	57	57		DR J C LAMONT	2 3 5
GRAND FORKS CAA	3616	GRAND FORKS	RED	47 56	97 05	834	CST	MID	MID	8	8		CAA	2 3 4 5
GRAND FORKS UNIVERSITY	3621	GRAND FORKS	RED	47 55	97 05	830	CST	MID	7P	58	58		UNIVERSITY OF N D	2 3 5
GRANO	3676	RENNVILLE	SOURIS	48 37	101 35	1625	CST		MID				ALVIN C REINKE	3 4
GRANVILLE	3686	MC HENRY	SOURIS	48 16	100 51	1504	CST	7P	7P	42	42		FRED ROBLE	2 3 5
GRENORA	3736	WILLIAMS	MISSOURI	48 37	103 56	2114	CST	5P	5P	40	40		L D NIELSON	2 3 5
RALLIDAY	3846	DUNN	KNIFE	47 21	102 20	2073	MST		6P		7		JOHN KISSE	3
RANKINSON RR STATION	3908	RICHLAND	RED	46 04	96 54	1068	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
RANNAFORD	3926	GRIGGS	SREYENNE	47 18	98 12	1428	CST		MID		8		HOMER A BENSON	3 4
RANMAR	3936	CAVALIER	PEMBINA	48 59	98 41	1568	CST	6P	6P	55	55		A E PRIOR	2 3 5
RANSBORO	3963	TOWNER	PEMBINA	48 57	99 23	1597	CST	7P	7P	41	41		W E DISHER	2 3 5
HARVEY WATER WORKS	4013	WELLS	SREYENNE	47 45	99 53	1596	CST		6P		46		R J REYNOLDS	3
HAZELTON RR STATION	4083	EMMONS	MISSOURI	46 29	100 17	1978	CST		MID		8		EPHRAIM ZACHER	3 4
RETTINGER	4178	ADAMS	GRAND	46 00	102 38	2675	MST	6P	6P	42	42		EDGAR MARTIN	2 3 5
HURDSFIELD	4343	WELLS	JAMES	47 27	99 55	1915	CST		MID		8		MRS H RUTH BUCHWITZ	3 4
JAMESTOWN CAA	4413	STUTSMAN	JAMES	46 55	98 41	1497	CST	MID	MID	8	8		CAA	2 3 4 5
JAMESTOWN STATE ROSP	4418	STUTSMAN	JAMES	46 53	98 40	1457	CST	7P	7P	57	57		N D STATE HOSPITAL	2 3 5
KENMARE	4646	WARD	SOURIS	48 40	102 05	1799	CST	MID	MID	17	17		THEO E ECKBERG	2 3 5
KENSAL WILDLIFE REFUGE	4656	STUTSMAN	JAMES	47 15	98 52	1440	CST	7P	7P	8	8		U S WILDLIFE REF	2 3 5
KRAMER 5 SE	4823	BOTTINEAU	SOURIS	48 39	100 37		CST		MID		9		PAUL A KRETSCHMAR	3 4
LA MOURE	4937	LA MOURE	JAMES	46 21	98 18	1382	CST	7P	7P	2	2		ANDREW REMICK	2 3 5
LANGDON EXP FARM	4958	CAVALIER	PEMBINA	48 45	98 21	1615	CST	5P	5P	53	53		V STURLAUGSON	2 3 5
LARIMORE	5013	GRAND FORKS	RED	47 54	97 38	1134	CST	7P	7P	56	56		JESSE P PHILLIPS	2 3 5
LEEDS	5078	BENSON	DEVILS LAKE	48 17	99 26	1515	CST	7P	7P	8	8		JOHN FAGAN	2 3 5
LINTON	5210	EMMONS	MISSOURI	46 16	100 14	1711	CST	8P	8P	32	32		WM HEYERMAN	2 3 5
LISBON	5220	RANSOM	SHEYENNE	46 26	97 41	1091	CST	7A	7A	45	45		ROBERT M JODSAAS	2 3 5
MADDOCK AGR SCROOL	5434	BENSON	SREYENNE	47 58	99 30	1604	CST	6P	6P	34	34		BENSON CY A & T	2 3 5
MANDAN EXP STATION	5479	MORTON	HEART	46 48	100 54	1750	MST	8A	8A	35	35		NO GT PLAINS FIELD	2 3 4 5 6
MANDAN FT LINCOLN PARK	5484	MORTON	MISSOURI	46 47	100 52	1700	MST	6P	6P	5	5		ISADORE W SMITH	2 3 5

STATION INDEX — Continued

STATION	INDEX NO.	COUNTY	DRAINAGE	LAT. O /	LONG. O /	ELEV. (FT.)	TIME OF OBSERVATION			YEARS OF RECORD			OBSERVER	REFER TO TABLES
							ZONE	TEMP.	PRECIP.	TEMP.	PRECIP.	EVAP.		
MANNING	5519	DUNN	KNIFE	47 14	102 46		MST		6P		8		MISS JEANETTE S DAWES	3
MARMARTH	5573	SLOPE	LIT MISSOURI	46 18	103 55	2714	MST	6P	6P	36	40		S P GRANE	2 3 5
MAX	5638	MC LEAN	MISSOURI	47 49	101 17	2093	CST	7A	7A	20	20		SOO LINE AGENT	2 3 5
MAYVILLE	5660	TRAIL	RED	47 30	97 19	975	CST	6P	6P	53	53		H A RAGAZ	2 3 5
MC CLUSKY	5710	SHERIDAN	MISSOURI	47 29	100 29	1943	CST	11A	11A	24	31		J A HAMILTON	2 3 5
MC GREGOR RR STATION	5720	WILLIAMS	MISSOURI	48 36	102 56		CST		MID		8		HARTVIN H HERMANSON	3 4
MC HENRY 5 N	5730	EDDY	SHEYENNE	47 38	98 35	1509	CST	8P	8P	26	26		C E BLASKY	2 3 5
MC LEOD 3 E	5754	RICKLAND	SHEYENNE	46 24	97 14	1075	CST	7P	7P	37	37		J G CARLSON	2 3 5
MC VILLE	5764	NELSON	RED	47 46	98 11	1467	CST		6P		5		H H KNIEFEL	3
MEDINA 1 W	5798	STUTSMAN	MISSOURI	46 53	99 19		CST		6P		8		RUDOLPH GRAF	3
MEDORA STATE PARK	5808	BILLINGS	LIT MISSOURI	46 55	103 33	2271	MST	5P	5P	5	34		HARRY ROBERTS	2 3 5
MEDORA TRNMP	5813	BILLINGS	LIT MISSOURI	46 58	103 30	2250	MST	5P	5P				T ROOSEVELT NAT PARK	2 3 5
MILNOR	5933	SARGENT	RED	46 16	97 28	1117	CST	6P	6P	6	6		E W WILSON	2 3 5
MINOT CAA	5988	WARD	SOURIS	48 15	101 17	1724	CST	MID	MID	53	53		CAA	2 3 4 5
MINOT EXP FARM	5993	WARD	SOURIS	48 10	101 18		CST	6P	6P	3	3		N C AGRI EXP ST	2 3 5
MOFFIT RR STATION	6015	BURLEIGH	MISSOURI	46 41	100 18	1760	CST		9A		6		SOO LINE AGENT	3
MOBALL	6025	RENVILLE	SOURIS	48 46	101 31	1639	CST	9P	9P	55	55		IVER JOHNSON	2 3 5
MONTPELIER	6105	STUTSMAN	JAMES	46 42	98 35		CST		8A		8		ROLF HANSON	3
MOTT RR STATION	6155	HETTINGER	CANNON BALL	46 22	102 20	2440	MST	6P	6P	42	42		NORTHERN PACIFIC AGT	2 3 4 5
MUNICH 4 SW	6195	CAVALIER	DEVILS LAKE	48 38	98 53	1598	CST	7P	7P	1	1		HAROLD FELDNER	2 3 5
NAPOLEON 2 SE	6255	LOGAN	MISSOURI	46 28	99 43	1955	CST	7P	7P	57	57		GLADYS J PETERSON	2 3 5
NEW ENGLAND	6315	RETTINGER	CANNONBALL	46 33	102 52	2621	MST	8A	8A	57	57		ADNA S HATCB	2 3 5
NEW SALEM 1 S	6365	MORTON	HEART	46 50	101 25	2163	MST	6P	6P	45	45		WM F GAEBE	2 3 5
OAKES WATER WORKS	6620	DICKEY	JAMES	46 08	98 05	1318	CST	8A	8A	20	20		C M HAGEN	2 3 4 5
OWESEE 3 SE	6703	BOTTINEAU	SOURIS	48 39	100 20		CST		MID		8		ARTHUR B VOLLMER	3 4
PARK RIVER	6857	WALSR	RED	48 23	97 45	998	CST	5P	5P	45	45		MARTIN SEVERSON	2 3 5
PARSBALL	6867	MOUNTRAIL	MISSOURI	47 57	102 08	1929	CST	6P	6P	17	34		C E SHUBERT	2 3 5
PEMBINA CAA	6947	PEMBINA	RED	48 57	97 15	792	CST	MID	MID	75	75		CAA	2 3 4 5
PETERSBURG	7027	NELSON	RED	48 01	98 00	1524	CST	7P	7P	5	18		F C OVERLAND	2 3 5
PETTIBONE	7047	KIDDER	MISSOURI	47 07	99 31	1856	CST	7P	7P	40	40		L H DETHLOFF	2 3 5
PORTAL	7201	BURKE	SOURIS	49 00	102 33	1954	CST	9A	9A	35	35		U S CUSTOMS SER	2 3 5
POWERS LAKE	7281	BURKE	MISSOURI	48 34	102 39	2205	CST	5P	5P	23	44		E J LEWIS	2 3 5
PRETTY ROCK	7311	GRANT	CANNONBALL	46 11	101 51		MST		6P		8		FREDA LEER	3
RAUB	7405	MC LEAN	MISSOURI	47 44	102 04		CST		MID		8		ALVIN LARSON	3 4
RICARDTON ABBEY	7530	STARK	HEART	46 53	102 19	2467	MST	7P	7P	33	33		ASSUMPTION ABBEY	2 3 5
RIVERDALE GARRISON DAM	7585	MC LEAN	MISSOURI	47 30	101 24	1910	CST	5P	5P				CORPS OF ENGINEERS	2 3 4 5
ROLLA	7664	ROLETTE	PEMBINA	48 52	99 37	1860	CST	7P	7P	11	11		THEO B FAGERLUND	2 3 5
RUGBY 1 N	7704	PIERCE	SOURIS	48 23	100 00	1542	CST	9P	9P	1	20		BOYD C RAWK	2 3 5
RYDER	7749	WARD	MISSOURI	47 55	101 40	2108	CST		9A		20		S C SCHELLENBAUM	3
SANISB	7834	MOUNTRAIL	MISSOURI	47 59	102 32	1835	CST	7A	7A	23	23		R J BUGGE	2 3 5
SARLES 3 E	7844	CAVALIER	PEMBINA	48 55	98 56		MST		MID		8		EARLE M TRELEAVEN	3 4
SEARING	7944	MC KENZIE	YELLOWSTONE	47 34	103 48		MST		MID		8		GLENN S MC RAE	3 4
SELERIDGE	7952	SIOUX	MISSOURI	46 02	100 56	2183	MST		7P		12		J B SMITH	3
SBARON	7986	STEELE	RED	47 36	97 54	1516	CST	8P	8P	22	25		HUGR LYON	2 3 5
SBERWOOD	8047	RENVILLE	SOURIS	49 00	101 38	1647	CST		6P		1		U S CUSTOMS & IMN SER	3
STANLEY	8276	MOUNTRAIL	MISSOURI	48 19	102 24	2258	CST	7P	7P	11	11		LEROY EDWARDS	2 3 5
STEELE	8366	KIDDER	MISSOURI	46 51	99 55	1857	CST	8P	8P	55	55		LEON V LESHNER	2 3 5
TAGUS	8627	MOUNTRAIL	MISSOURI	48 20	101 56	2179	CST		6P		20		GEORGE N PILGARD	3
TIMMER	8727	MORTON	CANNONBALL	46 22	101 00	1742	MST		8A		11		JENNIE GIFFORD	CLOSED
TIOGA	8737	WILLIAMS	MISSOURI	48 24	102 56	2279	CST		6P		20		L A SIMON	3
TOWNER	8792	MC HENRY	SOURIS	48 21	100 24	1482	CST	7P	7P	47	47		AUGUST B RIEDER	2 3 5
TROTTERS	8807	GOLDEN VALLEY	YELLOWSTONE	47 20	103 54	2419	MST		5P		23		WALTER GRUNEWALD	3
TURTLE LAKE	8840	MC LEAN	MISSOURI	47 31	100 53	1899	CST	8P	8P	35	35		A S HAAS	2 3 5
TUTTLE 8 SW	8850	KIDDER	MISSOURI	47 02	100 04	1936	CST		8P		40		ADAM LENO	3
UNDERWOOD 12W	8877	MC LEAN	MISSOURI	47 26	101 24	1750	CST	6P	6P	24	37		MRS. F W MATTOON	2 3 5
UPHAM WILDLIFE REFUGE	8913	MC HENRY	SOURIS	48 37	100 44	1425	CST	5P	5P	8	8		U S WILDLIFE REF	2 3 5
VALLEY CITY	8937	BARNES	SHEYENNE	46 55	98 00	1229	CST	6P	6P	44	44		MISS I C ROBERTSON	2 3 5
VAN ROOK	8970	MOUNTRAIL	MISSOURI	47 57	102 21	1864	CST	9P	9P	8	8		ERWIN A VENTSCH	2 3 5
VELVA	8990	MC RENRY	SOURIS	48 03	100 55	1511	CST	6P	6P	22	22		OSCAR ANDERSON	2 3 5
VERONA	9035	LA MOURE	JAMES	46 22	98 04		CST		10A		8		LOUIS J MANDSON	3
WABPETON POWER PLANT	9095	RICKLAND	RED	46 17	96 36	962	CST		MID		8		NEWTON O JONES	3 4
WARPETON STATE SCROOL	9100	RICKLAND	RED	46 16	96 36	962	CST	5P	5P	57	57		STATE SCH OF SCIENCE	2 3 5
WALBALLA	9155	PEMBINA	PEMBINA	48 56	97 55	966	CST		7P		8		PETER PAULUS	3
WASRBURN	9195	MC LEAN	MISSOURI	47 17	101 02	1731	CST	6P	6P	46	46		FRED F JEFFERIS	2 3 5
WATFORD CITY	9233	MC KENZIE	MISSOURI	47 48	103 17	2084	CST	8P	8P	36	36		J C ZELLER	2 3 5
WESTHOPE	9333	BOTTINEAU	SOURIS	48 55	101 01	1508	CST	6P	6P	43	43		REV R CAREY	2 3 5
WILDROSE	9400	WILLIAMS	MISSOURI	48 38	103 10	2258	CST		6P		19		JONATHAN WINKJER	3
WILLISTON L C BRIDGE	9420	WILLIAMS	MISSOURI	48 07	103 44		CST						U S WEATHER BUREAU	7
WILLISTON WB CITY	9425	WILLIAMS	MISSOURI	48 09	103 35	1877	CST	MID	MID	70	70		U S WEATHER BUREAU	2 3 4 5
WILLOW CITY	9445	BOTTINEAU	SOURIS	48 36	100 17	1471	CST	8P	8P	57	57		O M SANDERSON	2 3 5
WILTON RR STATION	9455	MC LEAN	MISSOURI	47 09	100 48	2159	CST	8A	8A	14	14		SOO LINE AGENT	2 3 5
WISBEK	9515	MC INTOSR	MISSOURI	46 16	99 34	2010	CST	8A	8A	28	28		H M LARSON	2 3 5
NEW STATIONS														
BEACH	0590	GOLDEN VALLEY	LIT MISSOURI	46 55	104 01	2814	MST	7A	7A				LUTHER F HODGIN	2 3 5
BILLSBORO	4203	TRAIL	RED	47 24	97 04	901	CST	6P	6P	43	43		ALFRED JAHNKE	2 3 5
WASHBURN POWER PLANT	9200	MC LEAN	MISSOURI	47 17	101 02		CST							7

See Page 115 for REFERENCE NOTES

See Page 118 for CORRECTIONS

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Nat Hist

U. S. DEPARTMENT OF COMMERCE
CHARLES SAWYER, Secretary
WEATHER BUREAU
F. W. REICHELDERFER, Chief

JUL 22 1949

CLIMATOLOGICAL DATA

NORTH DAKOTA

ANNUAL SUMMARY 1948

Volume LVII No. 13



NAT.
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WASHINGTON: 1949

NORTH DAKOTA, 1948

F. J. Bavendick, Section Director - Bismarck

GENERAL SUMMARY

The outstanding features of the weather during 1948 in North Dakota were the timely showers and the long growing season. It was a favorable year for crops and livestock. The year opened with heavy snow over the eastern and central sections and heavy snow fell in all sections during February. This necessitated much heavy feeding of livestock until late in March, but feed was plentiful. Much farm land, particularly in the eastern and central parts of the State, was flooded and some of the land in the eastern portion remained too wet for seeding and some Red River Valley land was flooded after seeding. With below normal precipitation in May, top soil outside the Valley was becoming dry. The combination of cool weather and beneficial showers during June was ideal for spring wheat and all small grains. July, although dry at the beginning, averaged above normal in precipitation and was generally favorable for all crops. The weather during August was about normal in all respects and was favorable for early harvesting. September was warm and dry. It was the driest September since 1897 and was favorable for harvesting and for the maturing of the corn crop. Frost occurred on the 7th and 9th in most northern and central sections, but in other sections killing frost did not occur at most places until October 9th. November was warm and it was an excellent month for outdoor work and for livestock. It was not until after the first week in December that cold weather set in. The precipitation during October and November was nearly all in the form of rain and soaked into the ground. Soil moisture, therefore, will be generally ample for starting the 1949 crop. Snow came to the north and northeast sections of the state during the last week in November and full winter conditions prevailed there for the remainder of the year. December had above

average snowfall and frequent blowing and drifting snow kept many roads blocked or heavy most of the time.

The average temperature for the year was 40.0 degrees which is 0.1 degree above the normal. The absolute range in temperature was 150 degrees from 108 at McLeod on July 8th to -42 at Willow City on January 17th. The greatest departures were 6.3 degrees below normal in March and 6.8 degrees above normal in September. During the cold wave in March -40° was recorded at Munich which is the lowest temperature observed in March over the State since 1916.

The average precipitation for the State was 17.45 inches which is 0.73 inches less than in 1947 and is 0.68 inches above the normal. The eastern division had 18.50 inches, or 0.66 inches below the normal; middle division had 17.21, or 1.13 above normal; and western division received 16.63, or 1.57 above normal. The greatest annual precipitation reported was 25.08 inches at Grand Forks; the least was 11.14 inches at Grenora. The greatest monthly amount was 10.68 inches at Pembina in July. The average snowfall was 41.8 inches or 10.4 inches above normal. The average number of days with 0.01 inch or more of precipitation was 76. Seven of the past nine years, from 1940 to 1948, averaged above normal in precipitation, while nine of the eleven years, from 1929 to 1939, were below average in precipitation.

Crop and property damage resulting from hailstorms during the year was estimated at more than three million dollars. Windstorms, not including tornadoes, caused damages estimated at approximately 93,000 dollars. There were no tornadoes reported during the year. Four people lost their lives in a blizzard in February.

ACKNOWLEDGMENT

In addition to the climatological data from some 6,000 Weather Bureau and cooperative weather stations, this bulletin series contains records from Hydroclimatic Network Stations which were formerly reproduced in the Hydrologic Bulletin Series. The Hydroclimatic Network is a nationwide net of rain gages -- mostly of the recording type which produce continuous records of precipitation. It was established in 1939 at the request of the Corps of Engineers, Department of the Army, to supplement existing precipitation stations in order to provide records of rainfall intensity which were essential to the planning of flood control and related works by the Corps of Engineers. This Network, now numbering about 2,000 recording, and 1,000 non-recording rain gages, has been maintained by the Weather Bureau through working funds transferred annually to the Weather Bureau by the Corps of Engineers. These transfers averaged about \$250,000 per year between 1940 and 1944, and nearly \$375,000 since that date. For the years 1940-42, the Department of Agriculture transferred about \$100,000 per year to provide data required in its work, and since 1947 the Bureau of Reclamation has transferred about

\$25,000 per year to meet the increasing needs of their program in the Western States.

Previous to the introduction of this bulletin Series, data from Hydroclimatic Network Stations were presented in bulletins (Hydrologic Bulletins) which were issued monthly for each of 8 drainage areas embracing the entire United States, but since the Network was established to meet the internal requirements of the Federal agencies referred to above, no provision was made for public dissemination of the data, distribution being limited to cooperating agencies and to certain public repositories. A list of locations where reference copies of the Hydrologic Bulletin Series are available for inspection may be obtained upon application to Chief, U.S. Weather Bureau, Washington 25, D.C.

Many other records published in this bulletin have been made available through the cooperation of various public offices, private agencies, and individuals as listed in the Station Index.

AVERAGE TEMPERATURES AND DEPARTURES FROM NORMAL

NORTH DAKOTA

1948

Table 1

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure
ALMONT 7 SW	16.2	-	11.9	-	20.6	-	44.4	-	55.7	-	63.2	-	71.5	-	72.3	-	66.6	-	48.3	-	31.7	-	15.0	-	43.2	-
AMIDON	18.8	4.2	14.4	-1.8	24.7	-3.5	46.6	5.2	54.8	1.3	61.5	-1.3	67.9	-2.5	69.5	1.1	65.5	7.1	47.8	2.8	30.5	-0.1	14.8	-4.3	43.1	0.7
ARVILLA STATE PARK	03.6	-	05.0	-	16.3	-	37.7	-	54.9	1.9	61.1	-1.0	67.1	-0.3	68.8	1.2	63.3	-	46.8M	-	27.7	-	08.6	-	38.9	-
ASHLEY	08.2	-0.5	07.4	-4.0	20.1	-4.8	43.4	1.0	54.4	0.2	62.0	-1.2	70.8M	1.1	68.8M	1.6	63.7M	5.8	45.3M	0.9	30.0	2.0	12.8M	-2.0	40.6	-
BALOBILL DAM	02.8	-	04.2	-	16.6	-	42.0	-	55.1	-	63.3	-	70.7M	-	68.8M	-	63.3M	-	46.4	-	29.3M	-	-	-	-	-
BEACH																										
BELLCOURT INDIAN RES	04.9	-	02.0	-	13.4	-	32.8	-	51.0	-	59.2	-	65.0M	-	64.1M	-	58.6	-	44.1	-	23.3	-	14.1	-	35.4	-
BELFIELD	17.8	3.5	14.0	-1.4	22.6	-4.9	43.8	1.7	54.8	1.7	60.9	-0.8	67.7	-2.3	68.6	0.6	62.6	4.6	47.3	1.6	30.6M	1.2	13.6	-6.2	42.0	-0.1
BISBEE	05.2	3.4	03.2	-3.3	12.8	-9.7	36.4	-4.3	54.6	1.9	61.1	-1.0	67.1	-0.3	66.9	1.2	61.6	4.9	45.3M	1.5	24.2	-2.2	05.9	-3.8	35.8	-2.2
BISMARCK WB CITY	12.2	4.2	09.8	-1.8	18.6	-6.6	44.7	1.6	57.3	2.8	63.9	-0.3	71.6M	1.1	71.2	3.0	65.5	7.4	46.8M	1.6	32.4	3.9	11.6M	-4.1	42.2	1.1
BISMARCK WB AIRPORT	11.3	5.0	07.0	-1.5	21.9	-4.7	44.2	3.8	56.5	3.5	63.6	-0.7	71.5	2.1	69.8	-3.1	64.8	7.5	46.0	2.4	31.5	5.0	11.2	-1.6	41.6	2.6
BOTTINEAU	05.6	4.2	03.8	-1.1	15.6	-5.2	36.6	-2.4	55.5	3.2	63.3	1.5	67.7	0.1	67.8	2.9	62.9	7.4	44.9	3.5	24.9	1.3	05.3	-3.0	37.8	1.0
BOTTINEAU STATE PARK	-	-	-	-	-	-	33.1	-	54.8	-	61.4	-	68.4	-	67.0	-	-	-	46.2	-	26.1	-	08.7	-	-	-
BOWBELLS RR STATION	08.4	3.6	02.2	-5.5	11.8	-9.7	31.8	-7.5	52.0	-0.4	60.0	-1.8	66.0	-1.5	65.5	0.7	61.0	6.4	44.4	2.6	27.4	1.2	07.1	-5.8	36.5	-1.4
BOWMAN COURT HOUSE	19.2	4.6	14.5	-2.9	27.4	-0.9	47.6	5.1	55.0	1.4	61.3	-2.1	68.8M	-2.1	70.8	2.7	65.9	8.1	49.7M	4.9	30.8	0.3	14.8M	-2.8	43.8	1.3
BUTTE	08.8	0.9	05.6	-7.5	17.2	-9.2	39.3	-2.0	54.4	-0.4	63.4	0.9	-	-	69.7	2.5	-	-	-	-	-	-	-	-	-	-
CARRINGTON	09.4	2.7	04.4	-4.5	13.6	-10.1	37.4	-2.2	53.5	0.4	60.7	-2.7	69.4	0.0	65.9	-0.2	61.6M	4.7	46.4M	2.7	28.4	1.1	10.2	-2.4	38.5	-0.9
CARSON 2 SW	15.4	5.3	11.7	-2.8	21.6	-5.4	45.4	2.9	56.2	1.7	63.0	-0.7	70.0	-0.8	71.2	2.6	66.6	8.5	47.3	2.8	30.7	0.9	15.0	-1.6	42.9	1.2
CASSELTON																										
CAVALIER POWER PLANT	01.0	-0.4	03.0	-3.1	15.6	-5.4	36.6	-2.6	54.6	1.0	61.7	-0.9	67.6	-1.4	69.3	3.4	64.1	8.5	47.8	4.8	27.8	3.1	08.5	-2.0	38.2	0.5
CENTER	12.8	3.0	08.6	-3.9	16.8	-9.7	40.7	-2.1	55.0	0.5	61.2	-2.5	67.9	-3.1	66.5	-1.5	62.2	4.1	44.9	-0.4	30.4	1.9	09.8	-6.6	39.8	-1.6
COOPERSTOWN	04.6	0.3	05.2	-2.6	15.8	-8.5	39.3	-1.0	55.0	1.2	63.1	-0.1	70.3	0.7	69.2	1.8	64.1	6.4	46.2	1.5	28.5	1.2	09.9	-3.1	39.3	-0.1
CROSBY	09.3	4.9	02.2	-7.3	11.1	-12.7	32.6	-7.3	53.7	1.4	60.8	-0.9	66.7	-1.2	67.0	2.0	60.0	5.2	43.5	1.3	28.3	1.8	05.0	-7.9	36.7	-1.7
DEVILS LAKE WB CITY	05.6	3.8	04.0	-1.1	14.9	-4.9	36.9	-1.9	54.6	2.0	62.6	0.7	68.6	-1.4	68.4	3.6	63.3	7.4	46.3	3.9	27.1	2.6	07.7	-1.8	38.4	1.4
DICKINSON CAA	16.6	6.0	10.2	-2.6	20.2	-5.3	43.0	1.2	53.6	0.9	60.2	-1.9	68.1	-0.9	69.1	2.6	63.7	7.3	46.3	2.5	29.9	1.7	13.2	-3.6	41.2	0.7
DICKINSON EXP STATION	15.1	4.5	08.8	-4.0	19.4	-6.1	43.1	1.1	53.6	0.9	59.8	-2.3	67.5	-1.5	68.3	1.8	62.8	6.4	45.2	1.4	30.3	2.1	12.2	-4.6	40.6	0.1
ORAKE	06.5	1.0	03.7	-6.7	14.4	-10.3	37.1	-3.3	56.0	1.3	63.0	-2.8	69.5	-2.1	69.2	1.6	63.8	6.2	45.6	2.5	28.4	2.5	08.8	-6.6	38.9	-1.2
DUNN CENTER	15.0	2.8	11.0	-3.1	19.3	-6.7	41.6	0.1	55.0	2.2	62.0	-0.5	68.7	-0.3	68.3	-	62.7	6.2	46.0	3.9	32.4	4.5	-	-	-	-
OUNSEITH ST SANITARIUM	05.8	3.0	03.4	-3.3	13.8	-6.7	34.8	-4.7	53.8	1.0	61.2	-0.2	67.7M	0.7	66.3	1.7	62.2M	7.2	46.0	4.4	25.2	1.1	07.1	-3.2	37.3	0.1
ECKMAN	03.2	0.1	00.8	-6.7	10.2	-12.8	37.2	-3.2	54.0	1.4	61.6	-0.4	67.7	-0.3	66.1	1.1	60.7	5.0	43.3	1.1	25.5	0.1	04.6	-5.7	36.3	-1.6
EDGELEY EXP FARM	09.6	0.8	09.6	-3.2	20.2	-7.1	45.4	2.8	56.2	1.8	63.4	-0.2	70.9	1.0	-	-	65.1	6.8	47.6	2.0	30.7	1.4	15.7	0.7	-	-
EDMORE 1 W	03.0	2.8	01.8	-3.0	13.4	-7.7	36.4	-2.9	54.4	1.2	62.6	0.3	68.3	0.8	66.9	2.1	61.6	5.2	45.7	3.2	26.9	2.3	05.4	-5.1	37.2	-0.1
ELBOWOODS	13.9	5.3	11.2	-0.9	18.6	-7.6	42.9	-0.1	56.2	1.6	62.2	-1.2	69.0	-0.9	68.0M	0.1	67.5M	10.0	46.5M	1.7	33.6M	5.2	11.2	-4.7	41.8	0.8
ELLENDALE NORMAL SCH	07.2	-2.8	09.6	-3.5	21.8	-5.4	46.2	3.5	55.6	0.3	62.5	2.3	70.8	-0.1	69.8	1.1	64.4	5.6	47.7	1.8	30.4	2.0	14.3	-2.0	41.7	-0.1
EPPIG	13.0	7.9	07.9	-1.5	18.0	-9.0	41.2	-0.5	56.2	1.2	62.6	-0.5	68.8	-2.0	70.1	2.6	64.3	7.6	46.9M	4.8	29.7	3.4	08.1M	-7.1	40.5	0.5
FARGO WB AIRPORT	03.0	-0.8	05.6	-2.5	17.7	-5.0	44.2	3.6	56.0	0.9	63.8	-0.6	71.2	3.1	70.0	3.9	64.7	6.5	48.1	3.6	29.0	1.9	11.7	0.2	40.4	1.2
FESSENDEN	08.0	3.3	06.2	-3.5	15.5	-8.2	38.0	-2.4	55.0	1.7	63.0	0.4	69.6	0.2	69.0	2.3	64.7	8.1	46.5	3.2	28.6	2.0	10.8	-1.0	39.6	0.5
FORMAN	06.6	-1.0	08.2	-3.7	21.6	-4.4	47.0	3.0	57.2	1.5	65.3	0.3	73.8M	3.7	72.3M	4.1	66.8	7.3	47.7M	1.7	-	-	-	-	-	-
FORT YATES	15.6	6.0	12.0	-0.6	22.5	-4.8	46.8	2.0	57.0	0.3	63.4	-3.2	72.0	-0.7	71.5	1.8	65.7	5.5	48.1	1.4	33.7	3.7	17.3	-1.9	43.9	0.9
FOXHOLM WILDLIFE REF	11.6	4.8	07.2	-4.2	16.4	-9.0	36.7	-4.1	55.6	1.4	63.4	-1.5	68.7	-1.0	68.2	1.6	63.9	7.7	46.9	4.0	29.3	3.7	-	-	-	-
FULLERTON	08.4	-0.7	10.2	-2.2	21.3	-5.8	46.4	3.7	57.2	2.4	63.6	-0.6	72.8	2.6	71.0	3.0	65.3	7.3	47.1	1.8	31.5	2.5	16.0	0.8	42.6	1.3
GACKLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GARRISON	11.0	3.1	07.6	-3.5	17.2	-7.2	40.4	-1.7	55.2	1.6	62.1	-0.8	69.2	0.0	68.7	2.1	63.7	7.8	45.9	2.7	29.9	3.4	09.8	-4.6	40.1	0.3
GOLVA	20.4	8																								

AVERAGE TEMPERATURES AND DEPARTURES FROM NORMAL

NORTH DAKOTA
1948

Table 1-Continued

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual		
	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	
VAN HOOK	13.2	-	09.7	-	18.6	-	41.2	-	54.6	-	62.8	-	68.6M	-	68.1	-	63.1	-	59	46.9	2.6	39.7	-	08.4	-	-	-
VELVA	11.4	4.7	08.8	-2.6	17.5	-	7.8	38.6	-5.8	55.6	1.0	63.0	-1.6	69.0	-1.0	68.1	1.3	63.1	5.9	46.9	2.6	39.7	1.5	09.9	-	-5.1	40.1
WAMPETON STATE SCHOOL	04.3	-4.4	08.2	-4.2	21.1	-	6.5	46.8	2.6	57.8	1.5	65.6	-0.2	73.2	2.3	71.3	2.6	66.1	6.1	49.2	2.2	31.9	2.9	14.4	-1.4	42.5	0.3
WASHBURN	14.8	6.6	11.8	1.1	20.8	-	4.7	44.2	0.9	55.6	0.3	64.0	-0.9	-	-	70.4M	2.3	65.7	6.4	47.8	2.8	32.3	2.9	12.8	-2.7	-	-
WATFORD CITY	16.2	6.4	11.8	-1.9	21.0	-	5.2	43.7	2.3	56.2	1.7	63.2	0.1	70.4	-0.7	70.5	2.2	64.7	7.0	48.0	3.8	31.5	3.0	11.4	-3.9	42.4	1.2
WESTHOPE	04.6	2.5	02.7	-5.0	11.2	-11.3	34.0	-5.9	55.4	2.3	62.4	-0.3	68.5	0.6	68.8	3.3	61.9	6.3	45.9	3.3	26.2	1.1	05.0	-5.2	37.2	-0.7	-
WILLISTON WB CITY	15.1	8.7	08.4	0.3	19.6	-	3.3	41.8	-0.2	56.0	2.0	62.8	-0.1	69.3	0.4	70.3	4.2	63.2	6.6	46.6	3.2	31.3	4.1	09.5	-4.3	36.4	-0.1
WILLOW CITY	04.4	3.3	02.0	-3.1	13.1	-	7.0	35.2	-14.4	54.4	2.2	61.8	0.5	67.9	1.3	67.1	2.9	62.2	7.5	45.4M	3.9	25.3	3.2	05.2	-4.0	-	-
WILTON RR STATION	09.6	1.6	06.5	-3.8	15.6	-	9.4	40.5	-2.0	55.0	1.1	63.3	0.5	68.9M	1.5	67.3	-0.4	62.9M	5.6	44.9	0.0	28.6	1.3	10.4	-4.4	39.5	-0.9
WISHEE	08.0	0.7	07.5	-2.7	20.1	-	6.0	43.4	1.9	55.0	1.8	62.3	-1.3	70.2	-0.2	67.7M	0.7	62.4	5.2	44.7M	0.7	29.7	1.3	11.8	-3.1	40.3	0.0

TOTAL PRECIPITATION AND DEPARTURES FROM NORMAL

Table 2

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure
ADAMS 7 S															1.72		0.05		0.85		1.75		0.50			
ALEXANDER R R STATION															1.12		T		0.28		1.36		0.82			
ALMONT 7 SW	0.25	-	0.67		0.43		1.13		1.47		3.30		1.61		1.26		0.26		1.10		1.05		0.44		12.97	
ALPHA 1 S	0.80	-38	0.74	-31	0.27	-52	1.09	-17	2.24	-11	3.21	-09	4.37	2.33	1.31	-30	0.46	-83	0.18	-72	1.07	-72	0.32	-14	16.06	0.86
AMIDON	0.99	-56	0.61	-14	0.05	-70	1.09	-23	2.11	-23	5.61	2.13	4.16	2.02	2.79	1.24	0.33	-114	0.40	-57	1.17	-76	0.23	-16	19.54	3.82
ARVILLA STATE PARK	0.47	-	1.77	-	0.77	-	1.87	-	0.75	-	4.09	-	3.94	-	0.97	-	0.71	-	0.70	-	0.79	-	0.70	-	17.53	-
ASHLEY	0.35	-09	0.88	-43	0.42	-41	1.92	-31	0.06	-2.34	3.64	-22	3.65	-99	0.78	-1.66	0.45	-1.02	-	-	0.49	-06	0.08	-42	-	-
BALDWIN DAM	0.37	-	0.24	-			2.39	-	0.83	-	3.62	-	2.87	-		-	0.54	-	1.16	-		-	0.19	-	-	-
BALFOUR R R STATION																										
BEACH																										
BELCOURT INDIAN RES	0.27	-	0.56	-	0.28	-	1.69	-	1.46	-	3.44	-	3.63	-		-	0.01	-	1.37	-	1.52	-	1.11	-		-
BELFIELD	0.78	-32	0.33	-12	0.34	-47	2.22	-93	1.91	-44	3.54	-12	4.54	2.32	1.93	-12	0.19	-1.15	0.38	-59	1.52	1.04	0.52	-04	18.20	2.12
BELLEVILLE	0.27	-03	0.86	-52	0.63	-04	1.44	-43	0.70	-1.64	3.62	-18	2.88	-60	1.60	-23	0.11	-1.44	0.95	-13	0.86	-50	0.67	-26	14.59	-1.04
BISBEE	0.37	-08	1.64	1.28	0.29	-42	2.26	1.07	0.85	-1.30	2.40	-96	6.34	3.64	4.14	1.79	0.24	-1.45	1.29	-30	1.65	1.18	2.06	1.63	23.53	6.68
BISMARCK WB CITY	0.34	-04	1.04	-65	0.45	-42	2.67	1.48	1.11	-1.12	2.71	-52	1.83	-45	0.91	-72	0.04	-1.40	1.52	-61	0.67	-19	0.33	-15	13.62	-1.89
BISMARCK WB AIRPORT	0.30	-15	0.85	-39	0.39	-50	3.05	1.53	0.78	-1.54	3.42	-07	2.35	-11	1.18	-64	0.02	-1.21	1.50	-56	0.70	-13	0.36	-21	14.90	-1.44
BOTTINEAU	0.48	-07	0.51	-15	0.25	-42	2.38	1.54	1.54	-51	1.95	-1.24	6.31	3.92	1.71	-74	T	-1.59	1.06	-09	0.71	-24	1.46	-99	18.36	2.50
BOTTINEAU STATE PARK							2.06	-	3.12	-	2.55	-	5.15	-	1.43	-	0.76	-	1.43	-	1.93	-	0.12	-	-	-
BOWBELL R R STATION	0.32	-18	1.43	1.01	0.04	-53	1.95	-89	1.96	-32	1.07	-2.17	3.84	1.61	1.39	-59	T	-1.41	0.66	-19	2.19	1.73	1.12	-74	15.97	0.59
BOWMAN COURT HOUSE	0.75	-31	0.35	-09	0.05	-63	1.39	-16	1.97	-35	3.64	-53	4.12	2.04	1.38	-36	0.31	-96	0.25	-63	0.95	-57	0.25	-10	15.41	0.49
BREIEN																	0.27	-	1.41	-	0.49	-	0.18	-	-	-
BUTTE	0.31	-05	1.22	-69	0.51	-31	3.30	2.00	1.18	-1.30	3.07	-33	4.55	3.36	1.98	-04	-	-	1.41	-	0.49	-	0.18	-	-	-
CARRINGTON	0.37	-05	0.94	-46	0.34	-35	3.30	1.97	0.47	-2.02	2.32	-1.13	5.61	3.00	1.95	-12	0.20	-1.22	1.57	-54	0.58	-03	0.24	-17	17.89	0.94
CARSON 2 S W	0.44	-08	1.10	-62	0.16	-70	1.12	-23	1.64	-76	3.74	-26	4.14	2.15	1.10	-56	0.00	-1.44	1.29	-38	1.03	-46	0.25	-23	16.01	0.03
CASSELTON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.06	-48	1.17	-73	1.41	-06	-	-	-	-	-	-
CAVALLER POWER PLANT	0.46	-21	1.42	-91	0.93	-17	4.15	2.76	1.70	-56	5.17	2.09	6.01	3.37	0.86	-1.65	0.01	-2.31	0.43	-86	1.42	-68	1.33	-64	23.89	5.03
CENTER	0.28	-09	1.50	1.08	0.78	-05	1.98	.75	1.22	-1.05	3.07	-39	1.96	-46	2.32	-61	T	-1.36	1.28	-37	0.74	-23	0.58	-14	15.71	-0.12
COGSWELL	0.07	-	T	-	0.30	-	1.20	-	0.90	-	3.55	-	3.30	-	0.80	-	1.00	-	1.05	-	0.10	-	0.08	-	12.35	-
COLGATE	0.20	-28	1.43	-94	0.90	-10	1.51	-15	1.17	-1.53	3.12	-36	4.18	1.65	2.64	-16	0.73	-1.10	1.37	-26	0.64	-03	0.12	-41	18.01	-0.75
COOPERSTOWN	0.52	-01	1.44	-92	0.49	-22	1.29	-10	1.13	-1.40	4.29	-102	5.42	2.83	1.25	-1.36	0.63	-1.13	1.30	-22	0.72	-08	0.71	-13	19.19	1.00
COURTENAY	0.13	-48	1.07	-49	0.40	-44	1.34	-09	0.55	-1.88	2.46	-74	3.04	-42	2.08	-32	0.47	-1.37	1.56	-41	0.70	-13	0.38	-29	14.18	-4.16
CROSSBY	0.31	-09	0.84	-48	0.26	-42	1.79	-86	1.73	-24	1.01	-2.18	3.88	1.80	0.69	-1.13	0.22	-1.02	0.47	-36	1.57	1.01	1.05	-55	13.82	-0.71
DAWSON															1.62	-	0.50	-	1.20	-	-	-	0.34	-	-	-
DEVILS LAKE W 8 CITY	0.37	-10	0.83	-32	0.75	-03	2.80	1.28	1.37	-66	2.50	-1.06	2.67	-10	0.63	-1.85	0.27	-1.36	1.68	-43	1.04	-32	0.79	-25	15.70	-2.36
DICKINSON CAA	0.31	-11	0.72	-29	0.28	-42	1.92	-72	2.13	-20	3.79	-27	3.77	1.56	1.10	-74	0.20	-1.10	0.40	-51	0.84	-36	0.50	-04	15.96	0.16
DICEINSON EXP STATION	0.52	-10	0.82	-39	0.33	-37	1.45	-25	3.20	-87	2.87	-65	3.18	-97	1.42	-42	0.22	-1.08	0.55	-36	1.14	-66	0.41	-05	16.11	0.31
DRAKE	0.15	-24	1.42	-95	0.38	-32	4.09	2.92	1.02	-1.06	1.98	-1.18	4.35	2.05	1.89	-13	0.02	-1.41	1.29	-25	1.31	-77	0.91	-50	18.81	3.10
DUNN CENTER	0.49	-13	0.83	-37	0.19	-56	2.05	-79	3.73	1.39	4.11	-41	5.41	3.08	0.90	-76	0.00	-1.40	0.54	-29	0.83	-19	-	-	-	-
DUNSEITH ST SANITARIUM	0.58	-15	0.79	-37	0.29	-33	1.70	-86	2.18	-31	3.26	-25	3.46	-79	2.52	-16	T	-1.67	1.09	-29	1.28	-78	1.29	-86	18.44	2.76
EDMAN	0.45	-09	1.03	-66	0.55	-01	2.87	1.96	1.25	-73	1.44	-1.54	4.19	1.83	2.72	-84	T	-1.50	1.17	-33	1.67	-1.18	1.28	-81	18.62	3.92
EDGELEY EXP FARM	0.52	-03	0.48	-00	0.39	-44	1.36	-39	0.75	-1.81	3.92	-25	4.30	1.73	-	-	0.69	-97	1.30	-28	0.68	-16	0.11	-38	-	-
ELMORE 1 W	0.47	-02	1.21	-80	0.32	-37	3.60	2.34	1.53	-33	2.18	-93	4.32	1.48	1.90	-43	0.10	-1.75	1.22	-24	0.93	-31	1.10	-56	18.88	1.90
ELBOWOODS	0.34	-01	0.75	-36	0.33	-20	3.15	2.14	0.79	-1.40	4.31	-63	2.86	-45	1.09	-75	0.00	-1.49	0.60	-20	-	-	0.24	-16	-	-
ELLENDALE NORMAL SCH	0.21	-25	0.73	-24	0.91	-04	1.56	-30	0.48	-2.13	4.67	1.26	5.69	3.04	1.80	-97	0.85	-1.83	1.34	-28	0.83	-27	0.15	-31	19.22	0.26
EPPING	0.44	-02	0.44	-04	0.10	-47	1.03	-04	1.17	-97	1.69	-162	3.29	1.24	1.26	-38	0.01	-1.28	0.50	-27	0.01	-58	0.71	-26	11.65	-2.81
FAIRFIELD 9 N	0.33	-11	0.77	-35	0.25	-47	2.93	1.71	2.21	-15	2.82	-81	3.92	1.64	0.72	-86	T	-1.38	0.60	-24	1.28	-83	0.55	-09	16.38	0.50
FARGO WB AIRPORT	0.77	-10	1.60	-89	0.87	-14	2.44	-26	1.05	-1.84	4.87	-52	4.10	-67	0.79	-2.10	0.85	-1.37	0.53	-1.16	0.87	-03	0.37	-35	15.81	4.53
FESSENDEN	0.38	-11	1.51	-99	0.53	-22	2.68	1.36	1.33	-95	4.87	1.39	3.35	1.78	1.66	-52	0.16	-1.35	1.20	-14	1.06	-46	0.88	-32	19.61	2.29
FORMAN	0.63	-18	0.54	-04	0.41	-38	1.54	-47	1.05	-1.90	4.00	-40	4.60	1.72	1.62	-1.13	1.02	-1.05	0.56	-79	-	-	0.08	-48	-	-
FORT YATES	0.75	-36	0.60	-14	0.28	-53	2.48	1.13	1.16	-1.00	3.12	-35	1.82	-26	1.08	-81	0.05	-1.40	2.08	1.09	0.73	-28	0.31	-07	14.46	-1.42
FOXHOLM WILDLIFE REF	0.23	-21	0.85	-38	0.12	-60	2.24	-99	1.83	-20	2.23	-75	3.02	1.09	5.05	3.07	T	-1.55	0.73	-15	1.37	-69	-	-	-	-
FULLERTON	0.38	-32	0.96	-25	0.74	-32	1.55	-59	1.33	-1.66	2.84	-107	2.06	-82	1.68	-86	0.80	-1.16	1.24	-13	0.75	-03	0.17	-60	14.73	-6.97
GACKLE															0.94	-1.41	0.85	-73	1.54	-58	-25	-29	0.06	-39	-	-
GARRISON	0.47	-10	1.52	1.01	0.63	-16	2.80	1.64	0.81	-1.52	2.86	-56	3.87	1.38	1.68	-26	T	-1.46	1.06	-20	1.20	-71	1.19	-71	18.09	1.79
GLEN ULLIN															1.43	-	0.13	-	0.86	-	0.87	-	0.51	-	-	-
GOLVA	0.96	-50	0.83	-46	0.30	-45	0.92	-26	1.52	-74	2.32	-1.27	3.83	2.01	1.50	-10	-	-	-	-	-	-	0.82	-29	-	-
GRAFTON STATE SCHOOL	0.47	-03	1.47	-90	0.84	-14	2.56	1.22	1.30	-72	5.42	2.17	4.40	1.64	0.73	-1.79	0.05	-2.11	0.39	-75	1.11	-42	0.23	-70	19.97	1.79
GRAND FORKS CAA	0.60	-07	1.03	-47	0.62	-16	0.72	-94	0.72	-1.74	6.40	3.12	4.16	1.38	0.51	-1.89	0.43	-1.49								

TOTAL PRECIPITATION AND DEPARTURES FROM NORMAL

NORTH DAKOTA
1948

Table 2-Continued

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure	Precip	Departure
LEEDS	0.30	-	0.86	-	0.44	-	2.50	-	0.97	-	2.58	-	-	-	1.69	-	0.44	-	1.40	-	1.59	-	1.20	-	-	-
LINTON	0.21	- .13	0.69	- .27	0.37	- .41	3.27	- 1.99	1.08	- 1.21	2.65	- .62	4.86	- 2.73	1.86	- .22	0.09	- 1.48	1.50	- .46	0.76	- .31	0.37	- .02	17.71	1.67
LISBON	0.30	- .29	0.67	- .08	0.83	- .10	1.41	- .52	0.54	- 2.23	3.08	- .82	5.82	- 2.92	1.73	- 1.17	1.19	- .81	1.15	- .09	0.75	- .12	0.09	- .42	17.56	3.13
MADDOCK AGR SCHOOL	0.42	- .00	1.26	- .86	0.72	- .08	2.11	- .99	1.19	- .86	2.72	- .67	2.48	- .21	2.51	- .20	0.05	- 1.61	1.18	- .20	1.31	- .80	0.98	- .55	16.93	0.33
MANDAN EXP STATION	0.47	- .10	0.92	- .53	0.40	- .44	2.82	- 1.54	1.23	- 1.03	2.32	- .96	2.28	- .03	1.08	- .50	0.01	- 1.45	1.34	- .44	0.53	- .01	0.31	- .14	13.71	- 1.93
MANDAN FT LINCOLN PARK	0.20	-	1.34	-	0.49	-	1.36	-	0.78	-	3.03	-	2.03	-	1.30	-	T	-	1.39	-	0.76	-	0.44	-	13.12	-
MANNING	0.73	- .34	0.91	- .50	0.26	- .47	1.11	- .04	3.02	- .73	3.39	- .26	3.95	- 2.04	2.56	- .94	0.52	- .74	0.15	- .64	1.60	- 1.23	0.61	- .21	18.81	4.44
MARMARTH	0.40	- .05	0.52	- .07	0.42	- .32	2.32	- 1.07	2.07	- .13	3.96	- .57	6.56	- 4.02	1.86	- .02	0.08	- 1.31	1.17	- .37	1.44	- .94	0.29	- .11	21.09	5.20
MAX	0.92	- .53	1.58	- 1.24	0.98	- .29	1.75	- .20	0.67	- 2.05	2.76	- .61	5.23	- 2.52	1.87	- .68	0.77	- 1.29	0.76	- .50	0.89	- .18	0.50	- .02	18.78	- 0.19
MC CLUSKEY	0.35	- .09	1.56	- 1.04	0.89	- .11	2.98	- 1.74	1.55	- .91	2.06	- 1.40	-	-	1.86	- .07	0.04	- 1.33	1.44	- .45	1.00	- .45	0.64	- .12	-	-
MC GREGOR RR STATION	0.28	- .14	1.09	- .64	0.81	- .12	2.62	- 1.25	0.92	- 1.39	2.29	- 1.18	4.16	- 1.36	1.76	- .56	0.31	- 1.12	1.37	- .32	0.91	- .37	0.66	- .17	17.18	- 0.16
MC HENRY 6 N	0.45	- .11	0.88	- .32	0.72	- .06	2.19	- .20	0.82	- 2.19	3.81	- .02	1.69	- 1.16	2.26	- .44	1.04	- .99	1.58	- .20	0.87	- .24	0.06	- .40	16.37	- 4.41
MC LEOD 3 E	-	-	-	-	-	-	-	-	1.89	-	2.16	-	-	-	2.10	-	0.22	-	1.15	-	0.79	-	0.43	-	-	-
MC VILLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MEDINA 1 W	0.06	-	0.73	-	0.42	-	3.55	-	0.13	-	2.42	-	4.53	-	2.23	-	0.23	-	1.71	-	0.22	-	-	-	-	-
MEDORA STATE PARK	0.54	- .00	0.68	- .29	0.06	- .70	0.87	- .28	1.81	- .37	2.65	- .77	4.37	- 2.48	-	-	-	-	0.21	- .57	1.65	- 1.27	0.57	- .09	-	-
MEDORA T R N M P	0.52	- .04	0.90	- .37	0.44	- .33	2.30	- .36	0.96	- 2.00	5.41	- 1.59	2.67	- .12	2.83	- .10	0.99	- 1.11	1.31	- .05	0.70	- .66	-	-	-	-
MILNOR	0.18	- .19	1.05	- .62	0.50	- .11	3.03	- 1.81	1.23	- .93	2.12	- .99	5.84	- 3.79	2.29	- .37	0.01	- 1.59	1.01	- .40	1.45	- .79	0.82	- .36	19.53	3.53
MINOT CAA	0.12	- .25	.87	- .44	.29	- .32	2.57	- 1.35	1.57	- .59	1.86	- 1.25	4.04	- 1.99	1.59	- .33	T	- 1.60	1.07	- .16	1.63	- .97	0.52	- .06	16.13	.63
MINOT EXP FARM	0.20	-	0.57	-	0.24	-	2.50	-	0.69	-	2.70	-	4.56	-	0.82	-	0.16	-	1.47	-	0.40	-	0.45	-	-	-
MOFFIT RR STATION	0.27	- .07	1.11	- .76	0.13	- .58	2.67	- 1.71	1.89	- .09	2.25	- .68	6.27	- 3.82	3.99	- 2.08	0.00	- 1.56	0.87	- .17	2.04	- 1.50	1.51	- 1.09	23.00	7.81
MORALL	0.75	- .26	0.49	- .01	0.15	- .71	2.00	- .78	1.78	- .48	4.18	- .93	2.48	- .35	1.14	- .62	0.53	- .84	0.54	- .29	0.81	- .35	0.48	- .00	15.33	- 0.26
MONTPELIER	0.21	-	0.87	-	0.33	-	1.79	-	1.38	-	1.91	-	4.37	-	3.01	-	0.02	-	1.41	-	0.79	-	1.10	-	-	-
MUNICR 4 SW	0.29	- .12	0.51	- .10	0.43	- .44	2.59	- 1.08	0.42	- 2.02	3.25	- .11	5.55	- 3.04	1.30	- .90	0.65	- .81	1.19	- .10	0.71	- .13	0.18	- .27	17.07	- 0.22
NAPOLÉON 2 SE	0.76	- .30	0.93	- .44	0.37	- .44	1.18	- .02	2.42	- .25	3.77	- .61	4.59	- 2.46	3.20	- 1.62	0.14	- 1.23	0.41	- .38	0.70	- .25	0.69	- .29	19.16	4.15
NEW ENGLAND	0.22	- .22	0.96	- .52	0.29	- .41	1.02	- .13	0.62	- 1.78	2.52	- .93	2.61	- .44	1.43	- .30	0.25	- 1.06	-	-	0.42	- .06	0.33	- .18	-	-
NEW SALEM 1 S	0.27	- .20	0.53	- .07	0.89	- .09	1.05	- .82	1.21	- 1.50	3.62	- .02	3.86	- 1.01	0.45	- 2.22	1.06	- .70	1.21	- .10	1.33	- .77	0.35	- .15	15.83	- 3.77
OAKES WATER WORKS	0.23	- .26	1.51	- 1.09	0.79	- .13	1.90	- .58	1.63	- .31	4.56	- 1.30	4.45	- 1.84	1.36	- .94	0.09	- 2.06	0.67	- .51	-	-	-	-	-	-
OMENEE 3 SE	0.28	- .06	1.05	- .66	0.27	- .31	1.89	- .82	1.35	- .82	3.43	- .06	3.38	- 1.16	1.63	- .21	0.00	- 1.49	0.75	- .00	1.40	- 1.01	0.73	- .32	16.16	1.02
PARK RIVER	0.80	- .17	0.49	- .13	0.44	- .36	1.00	- .26	1.56	- .63	4.74	- 1.55	10.68	- 8.27	1.01	- 1.28	0.11	- 2.07	0.43	- .77	1.57	- .82	0.60	- .02	23.43	5.29
PARSHALL	0.34	- .10	1.73	- 1.23	1.12	- .39	1.78	- .39	2.33	- .11	4.26	- .76	4.27	- 1.31	2.27	- .09	0.35	- 1.62	1.01	- .16	1.06	- .42	1.23	- .75	21.75	3.17
PEMBINA CAA	0.45	- .07	1.42	- 1.03	0.87	- .24	5.21	- 4.05	0.53	- 1.73	0.98	- 2.13	5.10	- 2.36	2.97	- .82	0.52	- .82	1.41	- .42	0.66	- .13	0.28	- .16	20.40	4.28
PETERSBURG	0.30	- .10	1.77	- 1.39	0.10	- .51	1.57	- .63	2.61	- .54	1.08	- 2.01	4.42	- 2.35	1.18	- .78	0.18	- 1.28	0.56	- .28	2.22	- 1.70	2.17	- 1.72	18.16	3.37
PORTAL	0.44	- .08	1.33	- .88	0.15	- .55	1.65	- .51	1.87	- .28	0.77	- 2.52	9.84	- 7.57	1.30	- .38	-	-	0.61	- .44	1.80	- 1.31	1.52	- .98	-	-
POWERS LAKE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PRETTY ROCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RAUB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RICHARDTOWN ABBEY	0.64	- .26	1.15	- .74	0.49	- .23	2.75	- 1.53	1.87	- .59	5.52	- 2.05	3.01	- .55	2.37	- .53	0.20	- 1.12	1.07	- .28	1.40	- .88	1.02	- .60	21.49	5.48
RIVERDALE	0.48	- .05	1.07	- .60	0.32	- .58	2.64	- 1.43	1.04	- 1.08	4.81	- 1.41	3.60	- .92	4.37	- 1.88	0.05	- 1.70	1.53	- .56	1.29	- .74	1.90	- 1.41	23.10	5.54
ROLLA	0.41	- .02	1.00	- .55	0.41	- .28	1.97	- .98	1.03	- .94	2.30	- .80	6.50	- 3.82	3.15	- 1.15	0.39	- 1.29	0.97	- .08	1.25	- .73	2.09	- 1.62	21.47	5.60
RUGBY 1 N	0.33	- .00	0.65	- .17	0.20	- .34	3.43	- 2.32	0.87	- 1.22	2.57	- .54	5.71	- 3.48	2.10	- .03	T	- 1.52	0.78	- .02	1.35	- .82	0.74	- .28	18.73	3.46
RYDER	0.49	- .01	1.17	- .72	0.29	- .29	1.13	- .01	1.87	- .08	2.79	- .58	4.93	- 2.91	2.07	- .47	0.00	- 1.34	0.64	- .13	1.76	- 1.23	1.10	- 0.65	18.24	3.58
SANISH	0.45	- .02	0.55	- .08	0.33	- .53	3.30	- 1.86	1.72	- .40	3.77	- .37	1.75	- .19	2.07	- .24	-	-	1.57	-	1.73	-	2.07	-	-	-
SARLES	0.28	- .19	1.20	- .72	1.15	- .53	2.68	- 1.20	2.07	- .67	2.89	- .72	4.43	- 1.74	1.55	- .82	0.56	- 1.49	2.16	- .87	0.94	- .22	0.49	- .01	20.40	1.40
SEARING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SELFRIDGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						

TEMPERATURE EXTREMES AND FREEZE DATA

NORTH DAKOTA

1948

Table 3

Station	Highest	Date	Lowest	Date	Last spring minimum of			First fall minimum of			No. of days between dates		
					24° or below	28° or below	32° or below	32° or below	28° or below	24° or below	24° or below	28° or below	32° or below
ALMONT 7 SW	104	9-15	-27	3-10	4-16 (23°)	4-16 (23°)	5-10 (29°)	10- 9 (31°)	10-10 (26°)	10-16 (20°)	183	177	152
AMIDON	105	9-15	-27	1-27	4-13 (23°)	4-27 (27°)	5-11 (32°)	10- 7 (31°)	10- 9 (22°)	10- 9 (22°)	179	165	149
ARVILLA STATE PARK	102	7- 6	-37	1-23	4-28 (24°)	5- 9 (25°)	5-29 (30°)	10- 1 (27°)	10- 1 (27°)	10- 2 (22°)	157	145	125
ASHLEY	101	9-16	-27	1-23	-	-	5-29 (32°)	10- 2 (29°)	10-10 (25°)	10-16 (24°)	-	-	126
BALDILL DAM	100	8-24+	-38	1-23+	4-11 (23°)	5-28 (25°)	5-28 (25°)	9- 9 (31°)	10- 2 (25°)	10-14 (22°)	186	127	104
BELCOURT INDIAN RES	93	9- 3	-38	1-23	4-28 (20°)	5-10 (28°)	5-29 (30°)	9- 7 (30°)	10- 1 (20°)	10- 1 (20°)	156	144	101
BELFIELD	99	B-30	-31	3-10	4-16 (22°)	5-12 (27°)	5-28 (32°)	10- 3 (31°)	10- 9 (19°)	10- 9 (19°)	176	150	128
BISBEE	95	7- 7+	-	-	4-16 (22°)	5-10 (28°)	5-11 (31°)	10- 1 (24°)	10- 1 (24°)	10- 1 (24°)	169	144	143
BISMARCK WB CITY	103	7- 7+	-30	3-10	4-13 (22°)	4-16 (28°)	4-20 (29°)	10- 9 (32°)	10-14 (28°)	10-16 (24°)	186	181	172
BISMARCK WB AIRPORT	104	7- 6	-31	3-10	4-12 (21°)	4-20 (28°)	4-20 (28°)	10- 8 (32°)	10-11 (28°)	10-16 (16°)	187	174	171
BOTTINEAU	95	9- 3+	-35	1-17+	4-13 (22°)	4-28 (26°)	5- 4 (30°)	9-30 (32°)	10- 1 (21°)	10- 1 (21°)	171	156	149
BOTTINEAU STATE PARK	93	8-19	-	-	4-28 (22°)	5- 9 (28°)	5-28 (30°)	9- 9 (31°)	10- 1 (25°)	10- 2 (22°)	159	156	104
BOWBELLS RR STATION	97	9- 4+	-34	3-10	4-28 (21°)	5-11 (26°)	5-11 (26°)	10- 1 (26°)	10- 1 (26°)	10-16 (17°)	171	143	143
BOWMAN COURT HOUSE	103	B-30	-25	1-27	4-13 (22°)	4-13 (22°)	5-10 (32°)	10-10 (21°)	10-10 (21°)	10-10 (21°)	180	180	153
BUTTE 4 W	-	-	-	-	4-15 (21°)	4-16 (27°)	-	-	-	-	-	-	-
CARRINGTON	102	7- 7+	-32	1-17+	4-13 (21°)	4-16 (27°)	5-28 (32°)	10- 2 (32°)	10-16 (26°)	-	-	153	127
CARSON 2 SW	105	9-15	-31	3-10	4-16 (21°)	4-27 (28°)	4-27 (28°)	10- 9 (25°)	10- 9 (25°)	10-10 (21°)	177	165	165
CASSELTON	99	8-24	-	-	-	-	-	10- 2 (27°)	10- 2 (27°)	10-17 (16°)	-	-	-
CAVALIER POWER PLANT	96	5-19+	-33	1-22+	5- 9 (22°)	5- 9 (22°)	5-10 (29°)	10- 1 (29°)	10- 2 (23°)	10- 2 (23°)	146	146	144
CENTER	102	9-15	-32	3-10	5-12 (24°)	5-12 (24°)	5-24 (32°)	10- 2 (30°)	10- 4 (28°)	10-13 (24°)	154	145	131
COOPERSTOWN	98	7- 6+	-36	1-23+	4-12 (15°)	4-13 (25°)	5-28 (32°)	10- 1 (30°)	10-14 (28°)	10-17 (11°)	188	184	126
CROSBY	101	9- 4+	-34	3-10	4-16 (24°)	4-28 (27°)	5-12 (32°)	9- 8 (32°)	10- 1 (24°)	10- 1 (24°)	168	156	119
DEVILS LAKE WB CITY	98	7- 7	-32	3-10	4-13 (20°)	4-16 (27°)	5-10 (31°)	10- 1 (27°)	10- 1 (27°)	10-16 (22°)	186	168	144
DICKINSON CAA	102	9-15	-28	3-10	4-16 (21°)	4-16 (21°)	5-10 (29°)	10- 8 (28°)	10- 8 (28°)	10-10 (20°)	177	175	151
DICKINSON EXP STATION	104	9-16	-33	3-10	4-16 (19°)	4-26 (27°)	5-28 (32°)	9- 9 (29°)	10- 9 (24°)	10- 9 (24°)	176	166	104
DRAKE	101	7- 6	-32	3-11	4-14 (23°)	5-10 (28°)	5-10 (28°)	10- 9 (30°)	10-16 (23°)	10-16 (23°)	185	160	152
DUNN CENTER	-	-	-31	3-10	4-16 (21°)	5-12 (27°)	5-28 (32°)	9- 9 (28°)	9- 9 (28°)	10- 9 (23°)	176	120	104
DUNSEITH ST SANITARIUM	99	7- 5	-33	1-17+	4-16 (22°)	4-29 (28°)	5-28 (29°)	10- 1 (26°)	10- 1 (26°)	10- 2 (24°)	169	155	125
ECKMAN	96	9- 4	-38	1-17+	4-16 (21°)	4-28 (28°)	5-28 (32°)	9- 7 (31°)	9- 9 (28°)	10- 1 (21°)	168	134	102
EDGELEY EXP FARM	100	7- 6+	-29	1-23	4-12 (17°)	5- 6 (28°)	5-29 (32°)	10- 2 (30°)	10-16 (25°)	10-17 (15°)	188	163	126
EDMORE 1 W	94	9- 3+	-37	1-23+	4-16 (24°)	4-16 (24°)	5-11 (32°)	10- 1 (21°)	10- 1 (21°)	10- 1 (21°)	168	168	143
ELBOWOODS	102	8-19	-32	1-27+	4-16 (20°)	5-12 (28°)	5-28 (30°)	9- 7 (32°)	10- 3 (28°)	10-10 (20°)	177	144	102
ELLEDALE NORMAL SCH	100	7- 6	-31	1-23	4-12 (18°)	4-13 (26°)	5- 6 (31°)	10- 2 (31°)	10-16 (28°)	10-17 (15°)	188	156	149
ELPPING	102	9- 3+	-32	3-10	4-16 (24°)	4-16 (24°)	5-10 (29°)	9- 9 (28°)	9- 9 (28°)	10- 9 (23°)	176	146	122
FARGO WB AIRPORT	101	7- 6	-34	1-23+	4- 9 (22°)	4-13 (28°)	5-28 (32°)	10- 1 (32°)	10- 2 (28°)	10-16 (23°)	190	172	126
FESSENDEN	100	9-15	-33	3-10	4-14 (17°)	4-16 (28°)	5-11 (32°)	10- 2 (30°)	10-14 (28°)	10-16 (24°)	185	181	144
FORMAN	102	7- 6	-34	1-23	4-12 (19°)	4-21 (28°)	5- 6 (31°)	10- 2 (32°)	10-11 (27°)	10-17 (12°)	188	173	149
FORT YATES	104	9-15	-25	1-23+	4-12 (22°)	4-20 (27°)	5-12 (32°)	10- 9 (31°)	10-10 (25°)	10-13 (24°)	184	173	150
FOXHOLM WILDLIFE REF	99	9- 3	-28	1-17	4-16 (24°)	5- 4 (28°)	5-10 (32°)	10- 2 (25°)	10- 2 (25°)	10-14 (24°)	181	151	145
FULLERTON	104	7- 6	-30	1-23	4-12 (19°)	4-13 (27°)	5-28 (31°)	10- 2 (31°)	10-17 (14°)	10-17 (14°)	188	187	127
GACKLE	99	9-15	-	-	-	-	-	10-10 (32°)	10-14 (27°)	10-17 (12°)	-	-	-
GARRISON	101	9-15	-28	3-10	4-16 (23°)	4-16 (23°)	5-28 (32°)	9- 9 (32°)	10- 9 (28°)	10-16 (15°)	183	176	104
GOLVA	-	-	-23	3-10	4-12 (22°)	4-15 (25°)	5- 4 (29°)	-	-	-	-	-	-
GRAFTON STATE SCHOOL	96	B-24	-37	1-23	4-13 (15°)	4-16 (26°)	5-10 (32°)	10- 1 (31°)	10- 2 (25°)	10-17 (15°)	187	169	144
GRAND FORKS CAA	96	5-19+	-38	3-10	4-28 (23°)	4-28 (23°)	5-28 (32°)	10- 1 (28°)	10- 1 (28°)	10-16 (19°)	171	156	126
GRAND FORKS UNIVERSITY	97	7- 8	-36	3-10	4-12 (21°)	4-16 (28°)	5- 9 (31°)	10- 1 (28°)	10- 1 (28°)	10-16 (24°)	187	168	145
GRANVILLE	98	8-23+	-32	3-10	4-16 (24°)	5-10 (25°)	5-29 (32°)	9- 9 (31°)	10- 2 (26°)	10-16 (21°)	183	145	103
GRENORA	101	7- 6	-29	3-10	4-16 (16°)	5-10 (28°)	5-10 (28°)	9- 9 (29°)	10- 7 (24°)	10- 7 (24°)	174	150	122
HANKINSON RR STATION	99	7- 7+	-34	1-23	4-13 (22°)	4-13 (22°)	5- 7 (30°)	10- 2 (32°)	10-17 (13°)	10-17 (13°)	187	187	148
HANNAH	91	7- 5	-37	1-23	4-16 (22°)	5-28 (28°)	5-28 (28°)	-	-	-	-	-	-
HANSBORO	94	9- 3	-34	1-23	4-16 (20°)	5-10 (26°)	5-28 (32°)	10- 1 (22°)	10- 1 (22°)	10- 1 (22°)	168	144	126
HETTINGER	104	9-15	-32	1-27	4-13 (22°)	5-12 (28°)	5-12 (28°)	9-28 (32°)	10- 9 (19°)	10- 9 (19°)	179	150	139
HILLSBORO	100	8-24	-38	1-23	4-12 (22°)	4-13 (28°)	5- 9 (31°)	10- 2 (25°)	10- 2 (25°)	10-17 (16°)	188	172	146
JAMESTOWN CAA	99	9-15	-33	1-23	4-12 (18°)	4-16 (27°)	5-28 (30°)	10- 1 (30°)	10- 2 (28°)	10-16 (16°)	187	169	126
JAMESTOWN STATE HOSP	104	7- 6	-30	1-23	4-12 (20°)	4-13 (27°)	4-16 (29°)	10- 2 (28°)	10- 2 (28°)	10-17 (12°)	188	172	169
KENMARE	97	7- 6+	-26	3-10	4-15 (23°)	5-10 (28°)	5-10 (28°)	10- 1 (31°)	10-10 (27°)	10-16 (18°)	184	153	144
KENSAL WILDLIFE REFUGE	99	7- 6	-35	1-23	4-16 (23°)	4-30 (27°)	5-28 (30°)	9- 9 (31°)	10- 1 (27°)	10-14 (24°)	181	154	104
LA MOURE	100	7- 6+	-31	1-23	4-13 (21°)	5- 6 (28°)	5-28 (31°)	10- 2 (30°)	10-14 (28°)	10-17 (13°)	187	161	127
LANGDON EXP FARM	99	7- 7	-40	1-23+	4-16 (22°)	5-10 (27°)	5-28 (32°)	10- 1 (21°)	10- 1 (21°)	10- 1 (21°)	168	144	126
LARIMORE	95	5-19+	-34	1-23	4-13 (14°)	5-10 (27°)	5-10 (27°)	10- 1 (32°)	10-16 (26°)	10-17 (14°)	187	159	144
LEEDS	100	9- 3	-35	1-23+	4-13 (14°)	4-29 (28°)	5-10 (29°)	10- 1 (24°)	10- 1 (24°)	10- 1 (24°)	171	155	144
LINTON	102	7- 6+	-32	3-10	4-12 (20°)	5- 6 (28°)	5- 6 (28°)	10- 8 (30°)	10- 9 (25°)	10-17 (9°)	188	156	155
LISBON	101	7- 7	-38	1-23	4-12 (18°)	4-15 (27°)	5-28 (30°)	10- 2 (26°)	10- 2 (26°)	10-17 (14°)	188	170	127
MADDOCK AGR SCHOOL	99	7- 6	-38	3-10	4-16 (23°)	4-16 (23°)	5-11 (32°)	9- 9 (31°)	10- 1 (26°)	10-19 (19°)	186	168	121
MANDAN EXP STATION	104	7- 7	-26	3-10	4-12 (22°)	4-16 (26°)	5-28 (32°)	10- 9 (30°)	10-11 (28°)	10-16 (21°)	187		

TEMPERATURE EXTREMES AND FREEZE DATA

NORTH DAKOTA

1948

Table 3-Continued.

Station	Highest	Date	Lowest	Date	Last spring minimum of			First fall minimum of			No. of days between dates		
					24° or below	28° or below	32° or below	32° or below	28° or below	24° or below	24° or below	28° or below	32° or below
SANISH	103	7- 6	-38	3-10+	4-17 (19°)	5-28 (28°)	5-29 (30°)	9- 9 (29°)	10-11 (22°)	10-11 (22°)	177	136	103
SHARON	96	7- 6	-36	3-10	4-13 (20°)	5- 9 (27°)	5-10 (30°)	10- 1 (28°)	10- 1 (28°)	10-16 (24°)	186	145	144
STANLEY	98	9- 3+	-32	3-10	4-16 (23°)	5-11 (25°)	5-28 (32°)	9- 9 (28°)	10- 2 (24°)	10- 2 (24°)	169	144	104
STEELE	101	9-15	-35	3-10	4-13 (20°)	4-14 (27°)	5-28 (31°)	10- 8 (28°)	10- 8 (28°)	10-16 (20°)	186	177	133
TOWNER	97	7- 6+	-38	3-10	4-15 (19°)	5- 8 (28°)	5-28 (32°)	10- 1 (29°)	10- 2 (25°)	10-13 (21°)	181	147	126
TURTLE LAKE	101	7- 6	-34	3-10	4-16 (24°)	4-16 (24°)	5-10 (31°)	9- 9 (32°)	10-10 (26°)	10-14 (23°)	181	177	122
UNDERWOOD 12 W	102	9-15	-	-	4-12 (12°)	4-20 (28°)	5-29 (31°)	9- 7 (31°)	10-10 (28°)	10-11 (23°)	188	173	101
UPHAM WILDLIFE REFUGE	100	7- 5	-	-	-	-	-	10- 1 (21°)	10- 1 (21°)	10- 1 (21°)	-	-	-
VALLEY CITY	100	7- 6	-33	1-23	4-12 (21°)	4-13 (26°)	5- 6 (31°)	10- 1 (31°)	10- 2 (27°)	10-17 (13°)	188	172	148
VAN HOOK	100	7- 6	-33	3-10	4-16 (21°)	4-16 (21°)	5-12 (29°)	9- 8 (32°)	-	-	-	-	119
VELVA	98	7- 5	-28	3-10	4-13 (22°)	4-16 (26°)	5-12 (31°)	10- 2 (29°)	10-10 (28°)	10-16 (23°)	186	177	143
WAHPETON STATE SCHOOL	103	7- 6	-34	1-23+	4-12 (21°)	5- 6 (27°)	5-28 (31°)	10- 2 (29°)	10-17 (16°)	10-17 (16°)	188	164	127
WASHBURN	102	7- 6	-28	3-10	4-12 (20°)	4-12 (20°)	5-29 (31°)	10- 9 (31°)	10-16 (21°)	10-16 (21°)	187	187	133
WATFORD CITY	103	9-15	-30	3-10	4-12 (20°)	5-10 (28°)	5-14 (31°)	9- 9 (30°)	10- 9 (26°)	10-12 (24°)	183	152	118
WESTHOPE	95	5-19+	-39	3-10	4-16 (19°)	5-10 (27°)	5-10 (27°)	9- 9 (31°)	10- 1 (21°)	10- 1 (21°)	168	144	122
WILLISTON WB CITY	101	9- 3	-29	3-10	4-12 (22°)	4-16 (26°)	5-12 (32°)	9- 9 (30°)	10- 9 (27°)	10-11 (23°)	182	176	120
WILLOW CITY	96	9- 3	-42	1-17+	4-16 (24°)	4-28 (28°)	5-28 (32°)	9- 9 (32°)	10- 1 (23°)	10- 1 (23°)	168	156	104
WILTON RR STATION	101	7- 2	-28	3-10	4-13 (23°)	4-16 (27°)	5-11 (30°)	10- 9 (29°)	10-16 (21°)	10-16 (21°)	186	183	151
WISHEK	100	7- 7+	-28	1-23+	4-20 (23°)	5- 6 (26°)	5-28 (32°)	9- 9 (31°)	10- 9 (28°)	10-10 (22°)	173	156	104

REFERENCE NOTES

Unless otherwise indicated, dimensional units used in this bulletin are: Temperature in °F; precipitation and evaporation in inches, and wind movement in miles. Evaporation is measured in the standard Weather Bureau type pan of 4 foot diameter unless otherwise shown by foot note following Table 4.

The four digit identification numbers in the Index are assigned on a state basis. There will be no duplication of numbers within a state.

Delayed data and corrections will be carried only in the June and December issues of Climatological Data.

- no record.
+ also later dates or months.
// gage is equipped with a windshield.
B adjusted to full month.
E water equivalent of snowfall wholly or partially estimated, using a ratio of 1 inch water equivalent to every 10 inches of new snowfall.
M 1 to 10 days' record missing; see monthly Climatological Data for detailed daily record.
P less than one-half day.
T trace, an amount too small to measure.
V includes total for previous month.

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W.B.O. WASHINGTON, D.C. -- 6-21-49 -- 1275 --

STATION INDEX

NORTH DAKOTA

1948

Station	Former station name	Index No.	County	Drainage	Latitude	Longitude	Elevation above mean sea level (feet)	Years of record			Opened or closed during year		Refer to tables
								Temperature	Precipitation	Evaporation	Month opened	Month closed	
ADAMS 7 S	ADAMS (NR)	0022	WALSH	RED	48 20	98 06							2
ALEXANDER RR STATION	ALEXANDER	0096	MC KENZIE	YELLOWSTONE	47 50	103 38	1200		8				2
ALMONT 7 W	(C) ALMONT 7 MI. W SW	0136	MORTON	HEART	46 43	101 39	2300	6	6				1 2 3
ALPHA 1 S	(H) ALMONT (NR)												
		0149	GOLDEN VALLEY	LIT MISSOURI	46 37	103 49			23				2
AMIDON		0209	SLOPE	CANNONBALL	46 29	103 19	2908	27	27				1 2 3
ARVILLA STATE PARK	ARVILLA 1 1/2 MI. N	0369	GRAND FORKS	RED	47 56	97 30	960	5	5				1 2 3
ASHLEY		0382	MC INTOSH	MISSOURI	46 02	99 22	2025	53	53				1 2 3
8ALDHILL DAM		0450	BARNES	SHEYENNE	47 02	98 05	1300	1	1				1 2 3
8ALFOUR RR STATION	8ALFOUR	0492	MC HENRY	SOURIS	47 57	100 32			8				2
8EACH		0590	GOLDEN VALLEY	LIT MISSOURI	46 55	104 01	2814				DEC		1 2
BELCOURT INDIAN RES	8ELCOURT	0626	ROLETTE	PEMBINA	48 50	99 45	1960	4	4				1 2 3
SELFELD		0639	STARK	HEART	46 52	103 11	2592	31	31				1 2 3
8EULAH		0766	MERCER	KNIFE	47 16	101 47	1780		34				2
BISSEE		0796	TOWNER	DEVILS LAKE	48 37	99 22	1601	46	46				1 2 3
8ISMARCK WB CITY	(C) 8ISMARCK	0814	SURLEIGH	MISSOURI	46 48	100 48	1670	74	74				1 2 3
8ISMARCK WB AIRPORT		0819	SURLEIGH	MISSOURI	46 46	100 45	1650	9	9				1 2 3
8OTTINEAU		0941	8OTTINEAU	SOURIS	48 50	100 27	1638	57	57				1 2 3
8OTTINEAU STATE PARK		0946	8OTTINEAU	SOURIS	48 56	100 22	2160	5	5				1 2 3
8OWBELLS RR STATION	8OWBELLS	0961	8URKE	SOURIS	48 48	102 15	1958	23	23				1 2 3
8OWMAN COURT HOUSE	8OWMAN	0995	8OWMAN	GRAND	46 11	103 23	2872	34	34				1 2 3
8REIEN		1052	MORTON	CANNONBALL	46 23	100 57	1719	24	24		SEPT		2
8UTTE	8UTTE 3 MI. W SW	1225	MC LEAN	SOURIS	47 50	100 40	1740	24	24				1 2 3
CARRINGTON		1360	FOSTER	JAMES	47 27	99 08	1579	51	51				1 2 3
CARSON 2 SW	CARSON 2 1/1 MI. SW	1370	GRANT	HEART	46 23	101 35	2500	37	37				1 2 3
CASSELTON		1400	CASS	RED	46 54	97 13	934	53	53				1 2 3
CAVALIER POWER PLANT	CAVALIER	1435	PEMBINA	PEMBINA	48 48	97 38	894	13	41				1 2 3
CENTER		1456	OLIVER	MISSOURI	47 07	101 18	2100	11	11				1 2 3
COGSWELL 6 W		1525	SARGENT	JAMES	46 07	97 55	1291		4				2
COLGATE		1686	STEELE	RED	47 14	97 39	1180		15				2
COOPERSTOWN		1766	GRIGGS	SHEYENNE	47 26	98 07	1428	52	52				1 2 3
COURTENAY		1816	STUTSMAN	JAMES	47 13	98 34	1523		15				2
CROSSY		1871	DIVIDE	SOURIS	48 54	103 18	1954	42	42				1 2 3
DAWSON		2018	KIDDER	MISSOURI	46 52	99 45	1730		8				2
DEVILS LAKE WB CITY	DEVILS LAKE	2158	RAMSEY	DEVILS LAKE	48 07	98 52	1471	44	73				1 2 3
DICKINSON CAA	DICKINSON AIRPORT	2183	STARK	HEART	46 48	102 48	2587	8	8				1 2 3
DICKINSON EXP STATION	DICKINSON 1 MI. NW	2188	STARK	HEART	46 53	102 48	2460	57	57				1 2 3 4
DRAKE		2298	MC HENRY	SOURIS	47 55	100 22	1634	19	19				1 2 3
DUNN CENTER		2365	DUNN	KNIFE	47 21	102 37	2191	50	50				1 2 3
DUNSEITH ST SANITARIUM	DUNSEITH 2 MI. N NE	2385	ROLETTE	SOURIS	48 50	100 02	2001	53	53				1 2 3
ECKMAN		2472	BOTTINEAU	SOURIS	48 39	101 03	1500	43	43				1 2 3
EDGELEY EXP FARM	(C) EDGELEY 2 MI. S	2482	LA MOURE	JAMES	46 20	98 42	1568	48	48				1 2 3
EDMORE 1 W	(H) EDGELEY (NR)												
ELBOWOODS	EDMORE 1 1/2 MI. W	2525	RAMSEY	DEVILS LAKE	48 25	98 29	1524	25	25				1 2 3
		2570	MC LEAN	MISSOURI	47 35	102 09	2082	56	56				1 2 3
ELLENDALE NORMAL SCH	ELLENDALE	2605	DICKEY	JAMES	46 00	98 31	1457	50	50				1 2 3
EPPING		2735	WILLIAMS	MISSOURI	48 18	103 21	2224	40	40				1 2 3
FAIRFIELD 9 N	FAIRFIELD 9 1/2 MI. N	2809	BILLINGS	LIT MISSOURI	47 19	103 12	2650		21				2
FARGO WB AIRPORT		2859	CASS	RED	46 54	96 48	895	68	68				1 2 3
FESSENDEN		2949	WELLS	JAMES	47 39	99 37	1610	37	37				1 2 3
FORMAN		3117	SARGENT	RED	46 06	97 38	1249	57	57				1 2 3
FORT YATES		3207	SIoux	MISSOURI	46 05	100 38	1670	49	49				1 2 3
FOXHOLM WILDLIFE REF	FOXHOLM 6 1/2 MI. NE	3217	WARD	SOURIS	48 27	101 33	1609	24	28				1 2 3
FULLERTON		3287	DICKEY	JAMES	46 10	98 25	1439	51	51				1 2 3
GACKLE		3309	LOGAN	JAMES	46 38	99 08	1951	18	18				1 2 3
GARRISON		3376	MC LEAN	MISSOURI	47 38	101 25	1911	72	72				1 2 3
GLEN ULLIN		3496	MORTON	HEART	46 49	101 49	2090		8				2
GOLVA	(C) GOLVA 1 MI. E	3556	GOLDEN VALLEY	LIT MISSOURI	46 44	103 59	2781	8	8				1 2 3
GRAFTON STATE SCHOOL	GRAFTON	3594	WALSH	RED	48 25	97 26	827	57	57				1 2 3
GRAND FORKS CAA	GRAND FORKS AIRPORT	3616	GRAND FORKS	RED	47 56	97 05	834	8	8				1 2 3
GRAND FORKS UNIVERSITY	GRAND FORKS 2 MI. W	3621	GRAND FORKS	RED	47 55	97 05	830	58	58				1 2 3
GRANO		3676	RENVILLE	SOURIS	48 37	101 35	1625		42				2
GRANVILLE		3686	MC HENRY	SOURIS	48 16	100 51	1504	42	42				1 2 3
GRENORA		3736	WILLIAMS	MISSOURI	48 37	103 56	2114	40	40				1 2 3
HALLIDAY		3846	DUNN	KNIFE	47 21	102 20	2073		7				2
HANKINSON RR STATION	HANKINSON	3908	RICHLAND	RED	46 04	96 54	1068	20	20				1 2 3
HANNAFORD		3926	GRIGGS	SHEYENNE	47 18	98 12	1428		8				2
HANNAH		3936	CAVALIER	PEMBINA	48 59	98 41	1568	55	55				1 2 3
HANSBORO		3963	TOWNER	PEMBINA	48 57	99 23	1597	41	41				1 2 3
HARVEY WATER WORKS	(C) HARVEY 3 MI. SE	4013	WELLS	SHEYENNE	47 45	99 53	1596		46				2
	(H) HARVEY (NR)												
HAZELTON RR STATION	HAZELTON	4083	EMMONS	MISSOURI	46 29	100 17	1978		8				2
HETTINGER		4178	ADAMS	GRAND	46 00	102 38	2675	42	42				1 2 3
HILLSBORO		4203	TRAIL	RED	47 24	97 04	901	43	43				1 2 3
HURDSFIELD		4343	WELLS	JAMES	47 27	99 55	1915		8				2
JAMESTOWN CAA	JAMESTOWN AIRPORT	4413	STUTSMAN	JAMES	46 55	98 41	1497	8	8				1 2 3
JAMESTOWN STATE HOSP	JAMESTOWN 2 MI. SE	4418	STUTSMAN	JAMES	46 53	98 40	1457	57	57				1 2 3
KENMARE		4646	WARD	SOURIS	48 40	102 05	1799	17	17				1 2 3
KENSAL WILDLIFE REFUGE	(C) KENSAL 7 MI. SW	4656	STUTSMAN	JAMES	47 15	98 52	1440	8	8				1 2 3
	(H) KENSAL (NR)												
KRAMER 5 SE	KRAMER (NR)	4823	BOTTINEAU	SOURIS	48 39	100 37			9				2
LA MOURE		4937	LA MOURE	JAMES	46 21	98 18	1382	2	2				1 2 3
LANGDON EXP FARM	LANGDON 1 1/2 MI. SE	4958	CAVALIER	PEMBINA	48 45	98 21	1615	53	53				1 2 3
LARIMORE		5013	GRAND FORKS	RED	47 54	97 38	1134	56	56				1 2 3
LEEDS		5078	BENSON	DEVILS LAKE	48 17	99 26	1515	8	8				1 2 3
LINTON		5210	EMMONS	MISSOURI	46 16	100 14	1711	32	32				1 2 3
LISBON		5220	RANSOM	SHEYENNE	46 26	97 41	1091	45	45				1 2 3
MADDOCK AGR SCHOOL	(C) MADDOCK 1 MI. E	5434	BENSON	SHEYENNE	47 58	99 30	1604	34	34				1 2 3
MANDAN EXP STATION	(H) MANDAN 1 1/2 SW	5479	MORTON	HEART	46 48	100 54	1750	35	35				1 2 3 4
	(H) MANDAN (NR)												
MANDAN FT LINCOLN PARK		5484	MORTON	MISSOURI	46 47	100 52	1700	5	5				1 2 3

See reference notes following Station Index

STATION INDEX

NORTH DAKOTA

1948

Continued.

Station	Former station name	Index No.	County	Drainage	Latitude	Longitude	Elevation above mean sea level (feet)	Years of record			Opened or closed during year		Refer to tables
								Temperature	Precipitation	Evaporation	Month opened	Month closed	
MANNING		5519	DUNN	KNIFE	47 14	102 46				8			2
MARMARTH		5573	SLOPE	LIT MISSOURI	46 18	103 55	2714	36	40				1 2 3
MAX		5638	MC LEAN	MISSOURI	47 49	101 17	2093	20	20				1 2 3
MAYVILLE		5660	TRAILL	RED	47 30	97 19	975	53	53				1 2 3
MC CLUSKY		5710	SHERIDAN	MISSOURI	47 29	100 29	1943	24	31				1 2 3
MC GREGOR RR STATION	MC GREGOR	5720	WILLIAMS	MISSOURI	48 36	102 56				8			2
MC HENRY 5 N	MC HENRY 6 MI. N NE	5730	EDDY	SHEYENNE	47 38	98 35	1509	26	26				1 2 3
MC LEOD 3 E		5754	RICHLAND	SHEYENNE	46 24	97 14	1075	37	37				1 2 3
MC VILLE		5764	NELSON	RED	47 46	98 11	1467			5			2
MEDINA 1 W	(B) MEDINA (NR)	5798	STUTSMAN	MISSOURI	46 53	99 19				8			2
MEDORA STATE PARK	MEDORA 1 1/2 MI. W	5808	BILLINGS	LIT MISSOURI	46 55	103 33	2271	5	34		JULY		1 2 3
MEDORA TRNMP		5813	BILLINGS	LIT MISSOURI	46 58	103 30	2250						1 2 3
MILNOR		5933	SARGENT	RED	46 16	97 28	1117	6	6				1 2 3
MINOT CAA	MINOT AIRPORT	5988	WARD	SOURIS	48 15	101 17	1724	53	53				1 2 3
MINOT EXP FARM	MINOT 4 MI. S	5993	WARD	SOURIS	48 10	101 18	1720	3	3				1 2 3
MOFFIT RR STATION	MOFFIT	6015	SURLEIGH	MISSOURI	46 41	100 18	1760			6			2
MOHALL		6025	RENNVILLE	SOURIS	48 46	101 31	1639	55	55				1 2 3
MONTPELIER		6105	STUTSMAN	JAMES	46 42	98 35				8			2
MOTT RR STATION	MOTT	6155	HETTINGER	CANNONBALL	46 22	102 20	2440	42	42				1 2 3
MUNICH 3 SW	MUNICH 3 1/2 MI. SW	6195	CAVALIER	DEVILS LAKE	48 38	98 53	1598	1	1				1 2 3
NAPOLEON 2 SE	NAPOLEON 1 1/2 MI. SE	6255	LOGAN	MISSOURI	46 28	99 43	1955	57	57				1 2 3
NEW ENGLAND		6315	HETTINGER	CANNONBALL	46 33	102 52	2621	57	57				1 2 3
NEW SALEM 1 S	NEW SALEM 3/4 MI. S	6365	MORTON	HEART	46 50	101 25	2163	45	45				1 2 3
OAKES WATER WORKS	OAKES	6620	DICKEY	JAMES	46 08	98 05	1318	20	20				1 2 3
OMEMEE 3 SE	OMEMEE (NR)	6703	BOTTINEAU	SOURIS	48 39	100 20				8			2
PARK RIVER		6857	WALSH	RED	48 23	97 45	998	45	45				1 2 3
PARSHALL		6867	MOUNTRAIL	MISSOURI	47 57	102 08	1929	17	34				1 2 3
PEMBINA CAA	PEMBINA AIRPORT	6947	PEMBINA	RED	48 57	97 15	792	75	75				1 2 3
PETERSBURG		7027	NELSON	RED	48 01	98 00	1524	5	18				1 2 3
PETTIBONE		7047	KIDDER	MISSOURI	47 07	99 31	1856	40	40				1 2 3
PORTAL		7201	BURKE	SOURIS	49 00	102 33	1954	35	35				1 2 3
POWERS LAKE		7281	BURKE	MISSOURI	48 34	102 39	2205	23	44				1 2 3
PRETTY ROCK		7311	GRANT	CANNONBALL	46 11	101 51				8			2
RAUB		7405	MC LEAN	MISSOURI	47 44	102 04							2
RICHARDTON ABBEY	RICHARDTON 1 1/2 MI. N	7530	STARK	HEART	46 53	102 19	2467	33	33				1 2 3
RIVERDALE GARRISON DAM		7585	MC LEAN	MISSOURI	47 30	101 24	1910				SEPT		1 2 3
ROLLA		7664	ROLETTE	PEMBINA	48 52	99 37	1860	11	11				1 2 3
RUGBY 1 N		7704	PIERCE	SOURIS	48 23	100 00	1542	1	20				1 2 3
RYDER		7749	WARD	MISSOURI	47 55	101 40	2108			20			2
SANISH		7834	MOUNTRAIL	MISSOURI	47 59	102 32	1835	23	23				1 2 3
SARLES	SARLES (NR)	7844	CAVALIER	PEMBINA	48 57	99 00	1585	8					2
SEARING		7944	MC KENZIE	YELLOWSTONE	47 34	103 48		8					2
SELFRIDGE		7952	SIoux	MISSOURI	46 02	100 56	2183		12				2
SHARON		7986	STEELE	RED	47 36	97 54	1516	22	25				1 2 3
SHERWOOD		8047	RENNVILLE	SOURIS	49 00	101 38	1647		1				2
STANLEY		8276	MOUNTRAIL	MISSOURI	48 19	102 24	2258	11	11				1 2 3
STEELE		8366	KIDDER	MISSOURI	46 51	99 55	1857	55	55				1 2 3
TAGUS		8627	MOUNTRAIL	SOURIS	48 20	101 56	2179		20				2
TIMMER		8727	MORTON	CANNONBALL	46 22	101 00	1742		11		AUG		2
TIOGA		8737	WILLIAMS	MISSOURI	48 24	102 56	2279		20				2
TOWNER		8792	MC HENRY	SOURIS	48 21	100 24	1482	47	47				1 2 3
TROTTERS		8807	GOLDEN VALLEY	YELLOWSTONE	47 20	103 54	2419		23				2
TURTLE LAKE		8840	MC LEAN	MISSOURI	47 31	100 53	1899	35	35				1 2 3
TUTTLE 8 SW		8850	KIDDER	MISSOURI	47 02	100 04	1936		40				2
UNDERWOOD 12 W	UNDERWOOD 11 MI. SW	8877	MC LEAN	MISSOURI	47 26	101 24	1750	24	37				1 2 3
UPHAM WILDLIFE REFUGE	(C) UPHAM 3 MI. N	8913	MC HENRY	SOURIS	48 37	100 44	1425	8	8				1 2 3
VALLEY CITY	(B) UPHAM (NR)	8937	BARNES	SHEYENNE	46 55	98 00	1229	44	44				1 2 3
VAN BOOK		8970	MOUNTRAIL	MISSOURI	47 57	102 21	1864	8	8				1 2 3
VELVA		8990	MC HENRY	SOURIS	48 03	100 55	1511	22	22				1 2 3
VERONA		9035	LA MOURE	JAMES	46 22	98 04				8			2
WAHPETON POWER PLANT	WAHPETON (NR)	9095	RICHLAND	RED	46 17	96 36	962		8				2
WAHPETON STATE SCBOOL	WAHPETON	9100	RICHLAND	RED	46 16	96 36	962	57	57				1 2 3
WALHALLA		9155	PEMBINA	PEMBINA	48 56	97 55	966		8				2
WASHEBURN		9195	MC LEAN	MISSOURI	47 17	101 02	1731	46	46				1 2 3
WATFORD CITY		9233	MC KENZIE	MISSOURI	47 48	103 17	2084	36	36				1 2 3
WESTHOPE		9333	BOTTINEAU	SOURIS	48 55	101 01	1508	43	43				1 2 3
WILDROSE		9400	WILLIAMS	MISSOURI	48 38	103 10	2258		19				2
WILLISTON WB CITY	WILLISTON	9425	WILLIAMS	MISSOURI	48 09	103 35	1877		70				1 2 3
WILLOW CITY		9445	BOTTINEAU	SOURIS	48 36	100 17	1471	57	57				1 2 3
WILTON RR STATION	WILTON	9455	MC LEAN	MISSOURI	47 09	100 48	2159	14	14				1 2 3
WISHEK		9515	MC INTOSH	MISSOURI	46 16	99 34	2010	28	28				1 2 3

(C) Former name used in Climatological Data.

See reference notes following Table 3.

(H) Former name used in Hydrologic Bulletin.

